

ALL Japan High School Forum 2019

要旨集 / Abstracts

Super Global
High Schools

WSupport Project
for Building
WWL Consortium

Glocal
地域との協働による
高等学校教育改革推進事業



All Japan High School Forum 2019

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地域との協働による高等学校教育改革推進事業（グローバル型）

Project for Reform of High School Education through Regional Collaboration

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Iramkarapte

~Enjoy the Difference~

SGH Number:2701

2701

Name of school: Ritsumeikan Keisho High School

Key Words: Multicultural Society

1.Introduction

We learned about the Ainu in a class called International Studies. During this class, we discussed multicultural society. Is Japan a multicultural society? What is multicultural society? There are various definitions and it was difficult to combine them into one. However, we recognized that indifference and ignorance are radical problems.

2.Methods and Results

Experiences Overseas

- New Zealand: We found differences between the Ainu and the Maori; the Maori can coexist with other people in NZ. How can we peacefully coexist like New Zealand?
- Finland: The Saami are northern people like the Ainu. Their traditional lifestyles are similar, but the Saami have combined them with modern life. How can we do that in Japan?

Research in Hokkaido

- Independent Research about the Ainu: The theme is “the Ainu culture and Ainu language can be passed on and on by incorporating Ainu literature into Japanese language classes”. We felt that the role of school education to pass on the Ainu culture has not been fulfilled.
- Fieldwork in Biratori: Biratori is a village where the population of the Ainu is around 75% and Nibutani Elementary School has special programs related to the Ainu. It’s a good example of an education for multicultural society.

3.Conclusion

From these researches, we decided to organize an event, which shows our experiences, lectures and individual studies.

Title: Let's think about “Multicultural Society”

Target: People who don't have any opinion about multicultural society

Purposes: To be able to comprehend multicultural society

To solve the radical problems of “indifference” and “ignorance”

To accept many differences

Reference Later

島津礼子「北海道におけるアイヌ文化学習の可能性と課題-ESDの観点から-」

(「広島大学大学院教育学研究科紀要第三部第67号2018」)

岡戸浩子「ニュージーランドの第二言語教育への意識に関する一考察」(『国際開発研究フォーラム』2004年)

北海道大学アイヌ・先住民研究センター「北海道アイヌ民族生活実態調査報告」(2015年)

Measures to Reduce the Potential Economic Impact on the Sapporo Snow Festival During the 21st Century Caused by Global Warming

2702: Sapporo Nihon University Senior High School

2702

Key words: global warming, the Sapporo Snow Festival during the 21st century, economic impact, a universal solution

1. Introduction

Many tourists visiting Hokkaido expect to be immersed in Hokkaido’s natural beauty and attractions. Much of Hokkaido’s tourism relies on the Siberian climate. The Sapporo Snow Festival and its artistic ice sculptures have attracted many domestic and international tourists. Annual revenue from the festival has reached 330 billion yen, which is a significant part of tourism revenue in Hokkaido. However, temperatures in Sapporo city are increasing due to climate change and, in particular, global warming (shown on chart 1). We hypothesize that the rise in temperature will make it difficult to create ice sculptures in the near future. We propose a solution associated with Sustainable Development Goal (SDG) 13 to tackle climate change.

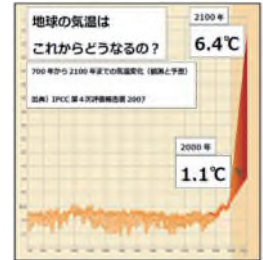


Chart 1

2. Methods and Results

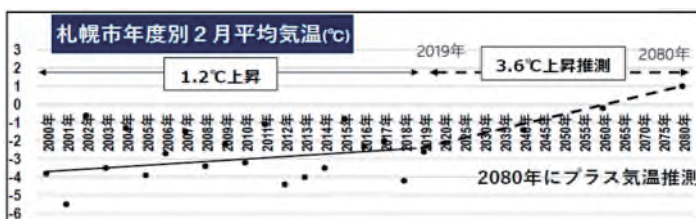
Data analysis of changing temperatures due to global warming in the 21st century and its impact on the Snow Festival

【The interviews of Sapporo Meteorological Observatory, Self-Defense Forces, and Hokkaido Tourism Organization】

Based on the prediction of climate change (graph 1), the average temperature in February will increase 5 degrees by the end of the 21st century. If the temperature rose 5 degrees, it would be difficult to hold the Snow Festival because the ice sculptures would be hard to maintain in such a climate. Ice sculptures actually collapsed with the abnormal weather conditions in 2012 (chart 2), and we hypothesize that the rise in average temperatures will have a huge impact on the Sapporo Snow Festival and make it difficult to hold the event in the near future.

To limit global warming (by reducing carbon dioxide emissions)

Comparing the emissions of carbon dioxide between gasoline cars, hybrid vehicles and electric vehicles, we found that hybrid vehicles discharge the less carbon dioxide. If we change all the gasoline cars in Hokkaido into the hybrid vehicles, 60 percent of the car emissions will decline in Hokkaido, implying an annual emission reduction of 4200 tons.



Graph 1

2012年2月観測気温

2012年2月	1日	2日	3日	4日	5日	6日	7日
平均気温	-7.6	-7.8	-6.6	-6.3	-3	0.7	0.3
最高気温	-5.3	-6	-3.9	-1.7	-1	3.3	2.2
日照時間(h)	0.5	4.6	4.3	3.4	2.9	5.5	0.6

Chart 2

3. Conclusion

According to statistics obtained and interviews conducted, a 5-degree-rise in temperature in Sapporo City can affect tourism in Hokkaido significantly. In order to ease the impact of global warming, we propose a change from gasoline cars to electric vehicles, which reduces car emissions effectively and prevents the temperature from rising. Sharing this idea with people around the world may have a positive influence on climate change and global warming!

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Improving Society for the Visually Impaired

2703: Iwate Prefectural Morioka Daiichi High School

Key words: the visually impaired, barrier free, public transportation system, Society 5.0, Internet of Things (IoT)

2703

1. Introduction

A while back, I was listening to a radio program that had my favorite band as their guest. They went to a nursing school for the visually impaired to celebrate Christmas Day. They said the children's smiles were so beautiful that they felt more motivated. I was impressed, and I began to feel like doing something for the visually impaired by myself.

To learn what difficulties the visually impaired are faced with, I visited Iwate Prefectural School for the Visually Impaired in Morioka. A teacher of the school taught me the following hardships: insufficient pavement of braille blocks and narrow sidewalks with many steps. In rural areas, railways are not convenient, so people use mainly cars or buses. Assuming that the visually impaired use buses; you would hit upon many obstacles. They have to walk on undeveloped sidewalks to reach the closest bus stop. There is no braille sign to indicate the timetable at the stop. Not all buses are low floor, in addition, they don't have enough room for the impaired. It is common to use tickets and cash or bus cards to pay for the fare, but since not all buses are the same, it's hard to locate the ticket dispensers and the fare collection machine.

2. Methods and Results

I visited National Chengchi University in Taiwan and met Prof. Li, who is an expert of tourism policy both in Taiwan and Japan. He taught me that the most desirable living environment for everyone is barrier free, and the idea of "Society 5.0" promoted by the Japanese government is very crucial to consider the problem.

Society 5.0 is the environment where people and everything are connected on the Internet; in other words, the Internet of Things (IoT). Looking back on the days I spent in Taiwan from the viewpoint of IoT, the most impressive one was my experience using an Easy Card. You can use the card when you take any public transportation; you can even shop at some retail stores with it. It is so easy to use the card: you just put the card on the specific panel. The card can keep your ride records, so when you transition from a bus to a train, discount can be automatically applied.

In addition to an Easy Card, I found other impressive technologies. Electric panels are attached to major bus stops, and they show us the operation state. Even minor bus stops hold QR codes to tell the same information. These are not all visually-impaired friendly, but they are much more advanced than what we have here in Morioka.

3. Conclusion

To realize the barrier free environment for the visually impaired, voicing and more user-friendly interface are the most important. Speaking of IoT, surely Taiwan is more advanced, but the electric panels show the operation state only in visual information; we can add voicing to them. In Japan, there are many kinds of prepaid transportation cards depending on where you live. We should unify them into a single multipurpose card like an Easy Card. Moreover, if we develop a system which automatically authenticates users' rides without putting cards, the visually impaired will be able to enjoy more comfortable life. Later, I want to suggest those ideas to firms which develop innovative software in Morioka.

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Awards

None

Educational Support for Rohingya Refugees

2704: Sendai Shirayuri Gakuen High School

Key words: Rohingya Refugee Education

2704

1. Introduction

From news and newspapers, we learned that Rohingya, a minority ethnic group, was forced to live in Bangladesh. Due to their refugee status, they do and did not receive school education. We thought that education was necessary for Rohingya refugees to be able to live a stable life. In particular, we wanted to develop learning materials that children could enjoy while learning.

2. Methods and Results

We learned about the situation from the certified NPO Shapurinir, which supports Rohingya refugees, and the Miyagi UNICEF Association. We also discussed what education is necessary for Rohingya refugees with Professor Jun Ushiwata of Sendai Shirayuri Women's University. In addition, through learning at an authorized NPO, IVYyouth, which makes learning materials for Cambodian children, we have begun to produce learning materials in earnest. In our Taiwan training, we received advice from Professor Nan of Kainan University to reflect on the emotional wounds of Rohingya refugees and the elements for their care in the teaching materials. Photojournalist Katsuya Shinbata is keeping up with the latest information on Rohingya refugees and is also working with the Burma Rohingya Association in Japan and Aung Ting, who founded a school in Bangladesh.

3. Conclusion

In order to improve the refugee problem, we have developed a “Page-a-day calendar with a math drill” by proficiency level. The purpose is to learn simple calculations with these teaching materials and to use them in real life such as in agriculture and business. Students are able to understand with pictures, and practice is established through exercises and exercise pages. In addition, a play design is added to help rejuvenate that makes children who have had a hard experience.

Learning materials will be delivered to Aung Ting Peace School, Rohingya School in Japan, and a school established by the United Nations. In the future, we will keep track of children's usage and make further improvements.

References

<https://www.japanforunhcr.org>

<https://world-note.com/rohingya-crisis>

Awards

Prevent Red Tide in Vietnam by Farming *Gibasa*

2705: Akita Prefectural Akita Minami Senior High School

2705

Key words: fishery damage, red tide, seaweed, *gibasa*

1. Introduction

In Vietnam, massive deaths of fish caused by red tide often happen. It is a serious problem for fishermen and general Vietnamese people. When the sea experiences eutrophication, red tide occurs. It occurs frequently in Vietnam, because they do not have enough water purification plants. A lot of industrial and domestic wastewater containing nutrient salts, such as nitrogen or phosphorous, flows into the sea. This causes many types of plankton to gather and float near the ocean surface, causing red tide. This kills a large number of fish because many plankton use a lot of oxygen and fish die from a lack of oxygen. So, if we suppress the eutrophication and prevent red tide, we can decrease the serious fishery damages.

2. Methods and Results

We want to prevent of red tide by farming *gibasa* in the sea of Vietnam. *Gibasa* is a kind of annual seaweed, and is popular in our hometown of Akita. It has an ability to absorb nutrient salts and control eutrophication. So, if we farm *gibasa*, we can prevent red tide. First, we put seeds of *gibasa* in pipes and water them using sprinklers. When the *gibasa* sprouts and grows up to the size that cannot be carried by waves, we put it into the sea. After that, the *gibasa* will continue to grow in nature. Therefore, it is easy to farm *gibasa* because it does not require specialized equipment. In addition, *gibasa* is native to Vietnam, so it can grow there and can easily be farmed.

3. Conclusion

Fishery damages caused by red tide in Vietnam are a serious problem. We want to farm *gibasa* in Vietnam to control eutrophication. If it works, red tide will no longer occur, and can help decrease these damages. *Gibasa* is native to Vietnam, so it is friendly to the ecosystem there. In addition, farming *gibasa* is relatively easy and cost-effective because it does not require specialized equipment. However, we have to conduct further research on its practicality and sustainability. One anticipated problem is training Vietnamese people to properly farm and eat *gibasa*. We will continue our research to improve this solution.

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Investigation for the Potential Introduction of Biomass Energy in the Fukushima Coastal Area

2706 Futaba Future School

2706

Key words: Community revitalization, Community resilience, Renewable energy

Introduction

Eight years have passed since the Earthquake and harmful chemicals from the Fukushima Daiichi Nuclear Power Plants forced a lot of residents in Fukushima Prefecture to evacuate from their hometowns. Those from the communities closest to the power plants have not returned to their home communities yet. The disaster uncovered the potential problems among these communities, and the people in Fukushima Prefecture are now experiencing them prior to other communities in Japan. Under the circumstances, if people continue to be ignorant of the problems in their communities, not only Fukushima Prefecture, but all of Japan cannot develop its communities' resilience. Last October, Fukushima Prefecture suffered from another typhoon disaster. Climate change is likely to cause more disasters in the other parts of Japan, and the world. We understand that we can no longer ignore the problems around us. Now we approach the problems in our communities, and consider possible projects.

Methods and Results

Although the Futaba Area used to be made of communities promoting nuclear power, one of our research teams is considering the clean, sustainable, and renewable energy from damaged areas with wild grasses or abandoned rice fields.

First, we tried making bioethanol from the wild alien grasses in Futaba Area. The areas are full of wild grasses such as Canadian Golden Rods. We tried using them to make bioethanol and, finally succeeded in making a little from the grasses. Now we are searching for ways to do so more efficiently, so that we can introduce it to our hometowns.

Second, we tried to make use of many microorganisms in the abandoned rice fields. They eat other organisms there and transfer electrons with them. We focused on this mechanism to generate electricity. We were able to get a small amount of electricity that only microorganisms from special kinds of deep, underground soils can make.

Conclusion

Our research team is enthusiastic about realizing a community, which makes use of the renewable energy above. Like Freiburg in Germany, we would like to develop our hometowns as the symbol area for the future and for sustainable energy. Last March, we visited the U.N. in New York and discussed how we should revitalize our community. The officers of the United Nations evaluated our projects, and helped us discuss the issues caused by climate change with many students from around the world. All of the members at the discussion considered the issues to be personal matters. In Japan, young people need to keep taking action to solve the problems in their communities, with a shared will to make our world more sustainable.

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Let's break invisible wall!

~Do we really understand what "multi-cultural understanding is?"~

2707: Saitama Prefectural Fudooka High School

Key words: Muslims

2707

1. Introduction

We took part in a training trip to Malaysia and Singapore this summer. Through our Malay village homestay visit to The National University of Malaysia (UKM), our negative perception of Islam has totally changed.

However, in Japan, there are still a lot of people who recognize Islam only from the negative perception shown in the media such as terrorism or ISIL. Since the number of Muslims visiting Japan is expected to increase. Something must be done. Of course it is important for Muslim immigrants to improve facilities, but before that, we believe it is important to solve the fundamental problem derived from Japanese awareness. We aim to create a comfortable community for everyone in Japan.

2. Methods and Results

First, we visited Tokyo Camii to know whether Japan is an easy place to live for Muslims. We heard a story from a Japanese Muslim there. He said that the first thing to be done is not establishing places of worship or providing halal food, but instead we need to change our image that Muslims are terrorists.

We also sent a questionnaire to students asking if they believe Japanese people are prejudiced against Muslims. As a result, foreign language course students were aware of Muslim's rules such as eating Halal and wearing a Hijab. This is because they interacted with Muslims as part of their class and training. The study also showed that 30% of the general course students have an image of Muslims being extremists and are terrified of them, while the percentage of the same question for the foreign language course students is 15%. Therefore we need to eliminate the prejudice of young people in order to make Japan comfortable for Muslims, and interacting with Muslims is an effective way to get rid of the prejudice. But we found that only 32% of students from this questionnaire want to interact with Muslims. If it stays like this, the number of people who are interested in Islamic culture will decrease and it will be hard to get rid of prejudice. Therefore, we propose to interact with Muslims in comprehensive learning classes.

3. Conclusion

We propose lessons to interact with Muslims by using Skype as part of class at class. For junior high school students, you can talk with Muslims by using English they have learned. By doing so, not only can they improve their English skill, but also they can learn about Islam. Through learning about Islam in junior high school, they may come to think about what they can do to help Muslims. And for high school students, you can do investigative learning, poster sessions, and also can research the problems of Malaysia. By taking these actions, we expect there could be a reformation of young people's mindsets and the chance to live peacefully in Japan without any clashing of cultures from now on.

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Aiming Partnership Construction

- the impact of International Collaborative Researches and Symposiums

2708

2708 Waseda University Honjo Senior High School

Keywords: sustainable and equal partnership, collaborative research, international symposiums, curiosity cycle

Introduction

For the past 5 years, our school has carried out various types of international and intercultural programs, which share a large ambition, “To build an Equal and Sustainable Partnership”. In this presentation, we will illustrate significance of planning long enough discussion sessions in international collaborative researches projects and symposiums for building sustainable and equal partnerships between academic partner schools.

Methods and Results

Carrying out a collaborative research with your classmates is simply much easier, faster and efficient. Then what are the advantages of participating in a project done across schools or even borders above all struggles and hardships? The most important phase of these programs are discussion sessions. What we think is natural isn't always the same for someone else. In order to persuade (or for it to make sense) to the other, there is need to look at your opinion from a different perspective and seek the words to explain it in a way they can understand or relate to you in a sense. This process of thought will create growth in the ability to explain yourself accurately. The following table shows some of research projects and symposiums the presenters have experienced.

research topic (partner schools)	duration of academic exchange and total discussion time
inbound tourism (Singapore)	4 days in Singapore (1.5-day discussion), 5 days in Japan (2.5-day discussion)
global issues (Korea)	4 days in Korea (2-day discussion), 3-month online discussion
China-Japan relation (China)	4 days in China (1-day discussion)

name of the symposium (year)	visiting schools	duration
Waseda International Symposium on Education and Culture (2018)	6 international, 2 domestic	4 days (0.7-day discussion)
Academic Exchange Week (2019)	2 international	4 days (1.5-day discussion)

Reviewing when and how we deepened our learning through these programs, we have come up with the “Intellectual Curiosity Cycle”. This is how it works. Stimulate one's mind / create further interest ⇒ have questions or something to clarify on ⇒ receive an answer ⇒ come up with an opinion to share ⇒ (back to start)

Conclusion

Through the years of experiencing SGH academic exchanges, we have found that discussion sessions are the places where partnerships are mainly built in any type of academic interaction, whether it is international or domestic. Interaction, in other words “communication”, is the only way to enhance the meaning of project contents. To this academic community, we would like to present an action plan as “Our Next Stage”, our proposal for making educational programs more effective so that they may provide positive impact on many young generation's minds in the current age.

“Familiar Foreigners”

Multicultural Coexistence in Housing Complexes

2709

2709 Chiba Prefectural Narita Kokusai High School

Key words: Multicultural Coexistence, Intercultural Communication

1. Introduction

Currently the number of foreign residents is increasing in Japan. We hear the motto “multicultural coexistence” everywhere. Despite this there are few communications between Japanese and foreign residents. Though we live in same Japan, foreign residents are sometimes rejected from apartments, just because they are “foreigners.” Regrettably there are many such discriminations. Though it is easy to advocate for “coexistence,” there are too many problems for it to be realized completely. I investigated the problems arising in areas where many foreign residents live; especially in terms of intercultural communication.

2. Methods and Results

I took a qualitative approach and conducted fieldwork at two places: house complexes in Yachiyo City and Kawaguchi City. The former is my hometown and populated by many foreign residents. They receive little public supports and have few communications with Japanese residents. The latter also has a large population of foreign residents. A grass-root attempt to prompt communication has been made at the Shibazono house complex, Kawaguchi. I went there and interviewed its residents’ association.

Through this interview, I found several factors which make the problems associated with multicultural coexistence difficult to solve. For instance, one interviewee told me that they wanted to live with residents equally, but there were several barriers to be overcome, such as language, difference of age, and so on. Indeed, communication seems difficult between young Chinese and old Japanese.

3. Conclusion

People were unanimous that it is important to make opportunities to communicate with each other. But several factors hindered them. Before this fieldwork, I had always thought about these problems from a foreigner’s perspective. But the voices of Japanese residents reminded me that they also had some worries. I should ponder the problems from both sides. Now the most necessary thing is a “bridge” between two peoples. Referring to the endeavors at Shibazono, I will try to build a “bridge” in my hometown.

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The "Share Cart" System

— Everyone has a **RIGHT** to enjoy shopping —

2710: Chiba Prefectural Matsuo High School

Key words: global aging, food deserts, incentive for the elderly, health promotion, social sharing

2710

1. Introduction

“Food deserts” are a global issue common in aging industrialized countries. In Japan, the number of elderly is increasing. The aging rate of Sammu city, our home town, is higher than the Japanese average. There are some ideas that fight against this such as home meal delivery, however this has the unintended effect of creating hermits out of the elderly.

2. Methods and Results

In order to incentivize the elderly to go out and shop, we devised the "share cart system" - similar to the "share cycle system" - , which connects supermarkets to stations and bus stops with shopping carts for the elderly to use. It will let elderly people be able to shop more comfortably. And it will help walking for elderly people.

They will become able to walk for long distances without overdoing it. They also can realize the enjoyment shopping themselves.

We then tried to carry out the system in our area.

3. Conclusion

There are some merits of shopping for the health of the elderly people.

- * It can lower one’s blood pressure.
- * It can lower the risk of heart attack.
- * It can make bone stronger.
- *It can prevent memory loss.
- *It can prevent lung cancer.

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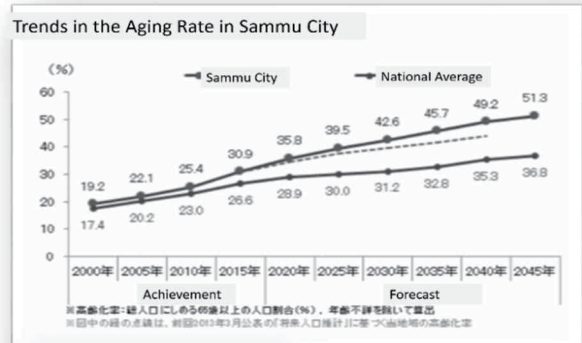
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Correlation between Steps per day , Rapid Walking , Diseases		
STEPS	WALKING TIMES	DISEASES that can be prevented or improved
2000	00.0 (min)	Bedridden
4000	05.0 (min)	Depression
5000	07.5 (min)	Dementia, Heart disease, Stroke
7000	15.0 (min)	Cancer, Arteriosclerosis, Osteoporosis
8000	20.0 (min)	High blood pressure, Diabetes, Glucose abnormality, Metabolic syndrome(over 75)
9000	25.0 (min)	Essential hypertension, Hyperglycemia
10000	30.0 (min)	Metabolic syndrome(under 75)
12000	40.0 (min)	Obesity

Reformation of Awareness on Nuclear Power Plants with a Documentary Film

2711: Tokyo Gakugei University International Secondary School

Key words: Nuclear energy, documentary film

2711

Introduction

For many years, the use of nuclear energy has been a controversial topic both globally and within our country. Everyday conflict between people who are pro nuclear and against nuclear is growing. We must come to a choice. However, the level of knowledge and awareness amongst the young generation is deeply low¹. Although sources such as media², school education³, risk communication by companies⁴, and so forth are what create our knowledge, they all have problems that need to be fixed. For this reason, as a new approach to raising the young generation's knowledge and awareness towards nuclear energy, a documentary film was made and screened.

Methods and Results

1. Methods

1.1 Creating the Documentary

The documentary was made by interviewing nuclear scientists, companies, NPOs, and government officials. Footage from going to research centers and Fukushima are used as well.

1.2 Screening

Screenings took place in high schools in Fukushima, Okayama, and Tokyo; a nuclear energy summit; and movie festivals. Data was gathered by conducting surveys before and after the screening.

1.3 Analysis

Using the data from the screenings, analysis was done by comparing the knowledge and awareness of before and after watching the documentary. The reasons for those changes were another subject for analysis.

2. Results

Looking at the data from the screenings, when students answered they got more interested in nuclear energy, their opinions towards it changed as well. The reasons for their increase in interest were because students realized their lack of knowledge, or their biased perspectives. Some of the answers were "I was able to learn something I didn't know", "I realized that I was only seeing this problem from one perspective". As for the change in opinion, "change" does not necessarily mean change from one side to another. By learning and taking in ideas from another side, students had a change in perspective.

Conclusion

From the screenings, it can be said that by showing a documentary that conveys nuclear energy from both sides, students were able to see nuclear energy from a new perspective, thus making the foundation for understanding their opposing sides in discussions. However, this research is lacking in data of students who still had low awareness after watching the documentary. Analysis must be done for not only why this documentary is effective, but for what kind of problems this documentary holds as well.

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An Experiment of Purifying Water Using Discarded Fruit Peels

2712: Tokyo Tech High School of Science and Technology

Key words: water purification, carbonization, usage of discharged fruits

2712

1. Introduction

We had the opportunity to know that there were rivers in Southeast Asia contaminated with toxic metals during our study tour to Malaysia and the Philippines, and that some people couldn't use clean water due to poverty. We heard a news of that the extraction of toxic metals from water using banana was succeeded (a study from a Brazilian university), and since many fruits are produced and consumed in Southeast Asia, we decided to test if any other fruits have similar characteristics of purifying water.

2. Methods and Results

We added and mixed 2g of grated fruit peels to 100 mL of 0.1 mol/L copper(II) nitrate aq and lead(II) acetate aq. As a result, copper(II) nitrate aq. changed its color to a clear light purple after addition, and the other tests showed no change. However, after a day, the color changed back to its first color. This experiment ended as a failure due to insufficient scientific explanation and theory. Then, for a more scientific way of purifying water, we decided to carbonize fruit peels. Charcoal have absorptivity due the its porous characteristics, and can be useful in purifying water. We stuffed a stainless can with banana peels and rice husks (to stuff the can completely), and heated it for approximately 2 hours and a half at the highest temperature of 450 degrees. The contents turned black and brittle, leaving its shape the same before the heating.

3. Conclusion

I believe we can conclude that due to the features of the rice husks and banana peels, the carbonization was succeeded. This can be used in a simple filtration device for water purification. As for future tasks, we would like to actually test how much possible it is for the carbonized banana peels to purify water at a scientific point of view, and also try if the carbonization can be done without the rice husks.

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Awards

‘Coffee-Seedling Planting Project’

More Choices in Life for Local Coffee Farmers in East Timor

2713: Aoyama Gakuin High School

2713

Key words: coffee seedlings, choices in life

1. Introduction

We are members of an independent study group at Aoyama Gakuin High School Blue Peco. Our group made our 4th visit to East Timor this summer to study an NGO’s support for fair trade coffee production. For these four years, we found the farmers’ motivation to produce better coffee has been getting higher and higher. On the other hand, some farmers’ sons have had opportunities to go to school in Dili, the capital city of East Timor. We think if we could help their coffee production be more stable, there will be fair chance for the local people to stay in their villages, engaging in coffee farming. We also learned that the instability of their coffee production partly comes from their adherence to ‘old’ coffee trees, which definitely need replacing. Their fear of temporary decline of the income, however, has kept them from doing ‘cut-back’, that is, cutting old trees and planting new ones. If this replacement is performed smoothly without income decrease, more and more young people will succeed their parents in coffee farming, rather than going down to the capital city for cheap labor. We would like our beloved Timor young people to have coffee production as one of their options in life in their future.

2. Methods and Results

During our autumn Global Week, which consists of chapel time and events supplying students with the knowledge of global issues, we announced in a chapel time the status quo of coffee production in East Timor and had opportunities to think about the farmers life in the mountain village, and ran the campaign called ‘Coffee-Seedling Planting Project’ during lunch time, where we held coffee tasting booths and a slide presentation to let them know more about the coffee farmers and their problems. Beside them we sold packs of coffee with some donation for a coffee seedling pot. Once they paid for a pack of coffee and donation, we had them scribble their name on small plates which are supposed to be placed along with the seedlings they got. We tried to raise their consciousness of the coffee farmers and coffee production as a job option for the young villagers. We were very happy that more than 130 students agreed with our idea and bought a pack of coffee with a donation.

3. Conclusion

Currently we are discussing with Peace Winds Japan, an NGO, to what extent those seedlings have to grow in the facilities under careful supervision of the local staff before being distributed to the individual farmers. And, of course, the next summer, our study group Blue Peco’s 5th visit to East Timor will find out more about the matrix of these distributions of our seedlings and the raising of the local farmers’ motivation, especially their sons’.

In thinking of fair trade, we have to consider that young generations of village farmers need an open future and job options, and we sincerely hope they will proudly choose coffee production among all others. We wish our practice might offer even the smallest help to them.

Aiming for being the number one country in PISA

2714: Fujimigaoka High School for Girls

Key Words: PISA

2714

1. Introduction

Why was Singapore ranked first for all the categories of scientific literacy, reading literacy, and mathematical literacy in PISA 2015, though it is a very small country with shorter history? We will look at the specific policies in education in Singapore and the current situation of education in Japan. Then we will clarify what students should acquire and what can be significant ways of improving education so that Japan will be a top country.

2. Methods and Results

Singapore is similar to Tokyo in land area, and is poor in natural resources like Japan. In contrast, Singapore spends as much as about 20% of its national budget on education, suggesting how important it regards the fostering of human resources for the sake of its economic development. In 2010, the Ministry of Education determined the policy for developing the 21st Century Competencies. Through this policy, a sophisticated curriculum, examinations nationwide, and a refined system of training teachers are carried out under national governance. Since Singapore was ranked first in PISA 2015, we can say that developing the 21st Century Competencies is strongly associated with its remarkable result.

When discussing the way of fostering 21st Century Competencies in Singapore, Co-curricular Activities, Values-in-Action, and Applied Learning Programs are essential to be focused on. To draw similarities among these three, the main goal is that the development of global leadership and higher competence in solving problems through student-orientated activities is above the framework between subjects. This can be seen in sciences, mathematics, and technologies. For example, in the subject of science, teachers use questions as an introductory approach. Students then understand the scientific phenomenon not through gaining knowledge from instructors, but through experiments or a deductive approach.

In PISA 2015, Japan was ranked 2nd for scientific literacy, 8th for reading literacy, and 5th for mathematical literacy. The educational method adopted in Singapore is highly likely to be a good role model in order to produce a better educational method appropriate to Japanese society. That must be a path to be a top leader in PISA results.

3. Conclusion

PISA has already revealed that “Computational Thinking” would be newly added to the mathematics assessment. This suggests that competence in solving problems in the field of sciences, mathematics, and technologies is getting more and more important. In Japan, the department of Political Science and Economics in Waseda University announced they would start requiring students to take a mathematics test. However, though mathematics and problem solving are important, there is still controversy as to how education in Japan should be reformed. Japan should positively integrate Japanese educational conventions into what we can learn from the success Singapore has achieved to foster the 21st Century Competencies. This is what Japan should do to be a leading country in PISA results. To support this conclusion, we will visit the Ministry of Education in Singapore next January.

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GREEN BEANS are good for HEAT STROKE prevention

Support the athletes of the world

2715 Yokohama Municipal Minami High School

2715

Key words: mung beans, heat stroke, Vietnam

1.Introduction

Last year, the number of people transported to hospitals due to heat stroke was a record high, although there was a big alert about the weather. We thought that this result was because the current heat stroke measures were insufficient, and we examined the current heat stroke prevention products. Then, we learned that existing products were not enough to prevent heat stroke when the body's temperature regulation function is low, which is likely to cause heat stroke. So, we were wondering if there was a way to prevent heat stroke in any case. Coincidentally, we came across "Mung Beans," a Vietnamese specialty. The beans have the effect of Kanpo as heat stroke prevention. We noticed that if we could use mung beans, we would be able to solve the current heat stroke problem, and we started activities to spread the awareness of mung beans.

2.Methods and Results

To learn more about the effects of mung beans on heat stroke, we visited a doctor who specializes in Chinese medicine and asked him about it. By consuming mung beans continuously, the body's temperature regulation function will improve, and the body will be less susceptible to heat stroke. Based on this, we thought that it is necessary to eat without getting tired every day, and developed a heat stroke prevention powder called "EEE powder" that can be added to any food or beverage. Through trial and error, we were able to create a powder that did not impair the taste of the dish. Currently, we are conducting demonstration experiments on the effectiveness of our products with the cooperation of 18 high school students while receiving advice from multiple universities. In addition to this, because mung beans are a rare ingredient in Japan, in order to raise their awareness, we are trying to develop products using mung beans in cooperation with a local bakery and anko manufacturing company.

3.Conclusion

In the future, due to global warming and abnormal weather, unprecedentedly hot summers may come to the world. If that happens, there will be a large number of people who can't cope with heat and fall down due to heat stroke. In order to prevent this from happening, we would like to continue activities to spread the awareness of mung beans.

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Key Words: Olympics, War, Atomic Bombs, Learning, Sharing, Spirit of Olympics

1. Introduction

Next year, we are going to hold Olympics in Tokyo for the second time, however, it could have been the third time for the Games to take place if we didn't have World War II. The 12th Olympics should have been held in Tokyo in 1940, but due to social instability during the war, it was cancelled. It shouldn't happen again. We think it's important to pass down the cruel experiences of the war victims and keep the spirit of the Olympics as a common understanding in order to build a peaceful society.

2. Methods and Results

We took a survey both in English and Japanese in July this year to find out how many our LINE contacts and Instagram followers know about the horror of atomic bombs. 83 Japanese people and 20 foreigners answered this survey.

There are some people who don't have knowledge about war. All of us should know how dreadful war was.

3. Conclusion

There are two things to build a good society. First, we have to learn how terrible war is. As the aging society grows, it's hard for victims to pass down because the number of victims is decreasing, so we should learn about the real experience of victims and continue sharing with the younger generations all over the world.

Second, we have to spread peace through the spirit of the Olympics and Paralympics. It is advocated as a common understanding with a spirit of friendship, fairplay, and solidarity to build a peaceful and better world. It is important for everyone in the world to have this spirit in our everyday lives.

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Gender Role

~ use a picture book to change Minamiuonuma City ~

2717: Niigata Prefectural Kokusai Joho High School

2717

Key words: gender role, sexual discrimination

1. Introduction

Not just the countryside like Minamiuonuma but also big cities in Japan have had fixed gender role for a long time. An idea such as “women should do all the housework and men should work for family” has affected people’s lives in the countryside like our city. This is a problem that we want to change and we hope the changes in Minamiuonuma can have a good effect on Japan as a whole.

2. Methods and Results

According to a survey, the rate of females in administration committee of Minamiuonuma City is only 9.8%. So we learn that the female leaders of Minamiuonuma City are few. And we took a questionnaire about gender role at 2nd graders at our school and we asked them two questions. One is “Do you think there is a fixed gender role around you?” and 79% of them answered “Yes” and 21% answered “No”. The other is “Have you ever been requested to behave like a girl or a boy?” and 49% answered “Yes” and 51% answered “No”. Some of them said they don’t want to be controlled by their difference in sex and people have a shortsighted thinking. From these surveys, we decided to make a picture book to suggest a new style of thinking to children who live in our city. Then we met two university students who like to draw pictures. Thanks to their advices, we finally decided the theme of our picture book.

3. Conclusion

Our picture book is based on “Momotaro” and we make two main characters in this story. One is named “Momotaro”. He is a quiet and homely boy. Another is named “Momoko”. She is an active girl who likes to play outside. The story is that they are not obsessed with their gender role, and at the end of the story they cooperate with each other to drive away the Oni. Then our picture book can give children a new style of thinking and make a good effect on the children who read our picture book. There are some advantages of making a picture book.

- (1) A picture book doesn’t hurt children’s eye because it doesn’t have blue light like smartphone.
- (2) Children can understand gender role easily.

We think children who read our picture book won’t have the fixed mindset about gender role, but they will have a more of free thinking about it. We hope that our picture book will go beyond Minamiuonuma. We hope it can spread around Japan and let every children get our new perspective of gender role.

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An Interactive Disaster Prevention Manual

~For Foreign People Living in Japan, the Land of Earthquakes~

2718: Ishikawa Prefectural Kanazawa Izumigaoka High School

2718

Key words: Disaster Prevention

1. Introduction

Now, Ishikawa Prefecture has a manual for foreign people to learn about what to do to protect themselves in disasters. The number of foreign people in Ishikawa has increased by four times in the past forty years and they will be more likely to be involved in trouble when earthquakes occur. Furthermore, according to our research, it has turned out that the manual is not effective enough. We think this problem needs to be solved. Therefore, we have decided to revise the current manual so that they can understand what to do easily in case of an earthquake. We believe it is very important in this globalized world to think about how to live in harmony with people from other cultures. Through our research, we will contribute to realizing a safe and peaceful environment for foreign people in our community.

2. Methods and Results

We gave 140 foreigners a questionnaire to consider what would be the best style of the manual. First, we asked them about the current manual to see whether the hypothesis is correct that the manual is not known to them and is not easy to understand. Second, we asked them what they would do when earthquakes occur. Unexpectedly, 60% of the foreign people know about current manual and 80% of them think it is easy to understand. However, we have found 30% of them do not have the right knowledge about what to do when earthquakes occur even though they have read the current manual. We think the manual needs to be revised. We also asked some Americans on our school trip to America about how to revise the manual, and they said the quiz style which we suggested was effective and that using pictures was also good.

3. Conclusion

We have made three improvements to the current manual. First, we use a quiz style, which will make it easier for foreigners to realize that they might not have the right knowledge about disaster prevention when they make mistakes in the quizzes. They can also learn the correct answers by reading the explanations. Second, we include a lot of pictures, which will be more interesting and easier for them to understand. Third, the current manual is multi-lingual but complicated because it is written in six languages, so we just use one language per booklet to make it simpler, and we will prepare similar ones in other languages. Now, we have made two prototypes of our original manual. First, a multiple choice type where foreigners choose correct answers from the choices that include common mistakes they would make. Second, a picture book type where they point out problems in the pictures about when earthquakes occur, and think about the best solutions. From now on, in order to see if our original manuals are effective for foreigners in Ishikawa, we plan to ask more foreign people in Ishikawa about our manuals.

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For a World that is Kind to Everyone

Improving Society with Inclusive Education

2719: Nagano Prefectural Ueda Senior High School

2719

Key Words: inclusive education, inclusivity, primary education, symbiotic society

1. Introduction

On one of my school's fieldwork trips, I visited an elementary school in a small village with about 250 students. Both children with and without disabilities were playing together happily, and I was impressed by the school's inclusive education program. People around the world are trying to make more inclusive and accessible societies for people living with disabilities, but I think the majority of people's thinking and everyday environments do not yet have appropriate accommodations. I think inclusive education will help improve our world further.

2. Methods and Results

For my independent research project, I focused on inclusive education at elementary schools. Inclusive Education is a schooling method where children with and without disabilities are taught together in the same environments. With this method, students from diverse backgrounds can learn about each other's' experiences. The Japanese government is trying to promote this style of education, but it has not become commonly used in Japan yet. In other countries, it is more widespread. For example, in UK, almost all students with disabilities attend local schools instead of specialist schools.

From my research, I found that there are some challenges which prevent Japanese schools from using this system. The main problem is a lack of teachers who have specialist knowledge for teaching students with disabilities. Without special training, this type of education becomes a large burden on teacher. From interviews I conducted with elementary school teachers, I found that they were very busy. Japanese elementary school teachers teach every subject to their home room, so they have many classes with lots of preparation work that they need to do every day. In addition, they have a large paperwork burden for staff meetings and school records. Although inclusive education is a good system for creating a more equitable society, I think it is difficult to use it now in Japan with overworked teachers.

3. Conclusion

One way Japan can begin using this method of schooling is by changing the elementary school system to have subject-specialist teachers. This will reduce the amount of subject planning teachers will do, to allow them more time to consider individual students. With this, teachers will be able to support children with disabilities more. Also, the number of students per class should be reduced to allow the teachers to focus on their students. By gradually changing these things, Japan can begin to implement inclusive education. Children without disabilities will be able to understand the experiences of people with disabilities more, and society will become more inclusive. I hope this will give people living with disabilities more opportunities in the future.

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Awards

N/A

#KuToo

Make our society more equal and comfortable

2720: Affiliated Upper and Lower Secondary Schools, School of Education, Nagoya University

Key words: high heels, experiment, inefficient, in business, cold stares, gap in awareness, equal and comfortable

2720

1. Introduction

Going to work with high heels is very common in Japan. Many women tend to wear them at work, and over time this has caused companies to pressure women to wear only one type of shoe. This is completely unfair. There is a world-wide movement which is called #KuToo. It criticizes this situation in a way inspired by the #MeToo movement, combining #MeToo with the Japanese words "Kutsu" which means "Shoes" and "Kutsuu" which means "Pain".

2. Methods and Results

We did an experiment at school where 4 students, including 3 boys, walked on the same route, using high heels and then regular shoes. It took a longer time for all of them to walk with high heels than their usual shoes. In addition, some felt pain in their feet and got blisters. All of them felt nervous when they were using stairs. This experiment shows that by wearing high heels, we may harm our health and waste time doing everyday activities. Why, then, do so many companies force their female employees to wear such inefficient shoes in business?

Some articles have mentioned the #KuToo movement. They say many Japanese companies require women to wear high heels to work even if they are suffering from the pain. On the other hand, even if they wear flat shoes, people still find it hard to work because of the cold stares they receive from their colleagues.

We conducted a questionnaire to find out how many people wear high heels or pumps at their workplace, asking "Do you or women in your office wear high heels or pumps?" We did this with 168 people in Nagoya city. In an additional questionnaire for those who answered YES, we then asked "why do they wear them?", and gave three answers; ①because it is a company rule ②because they think it is good manners for them to wear high heels or pumps at work ③because the women themselves want to wear high heels or pumps at work. The results were 36% YES, or about 60 people. Interestingly, nearly 22% of male respondents chose ③, compared to only 14% of female respondents, showing a gap in awareness between men and women on these issues.

In our SGH oversea studies programs, we asked our foreign friends who are the students in NC, the USA about the situation. Also we analyzed the witness of a student who experienced the Tobitate Program by the Ministry of Education. The situation is sometimes the same but sometimes is not the same as in Japan.

The idea that women who don't wear high heels at work are rude is now being changed little by little, but it is still not perfect. Similarly, being forced to wear sneakers would not be good either. Being able to choose the shoes we wear freely is the best solution, except for special occasions.

3. Conclusion

These days, there is an activist who teaches people the right way to wear high heels, and her suggestions have helped people who have to wear high heels without pain. In addition, #KuToo carried out a signature campaign and submitted it to the Ministry of Health, Labor and Welfare. Following our research, as high school students, we are spreading this movement with posters, on social media, and so on. We have already made posters and are now waiting for permission to put them up. It is our wish to make our society more equal and comfortable.

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Let's spread Yogo Teachers!

2721: Aichi Prefectural Jishukan High School

2721

Key words: *Yogo* Teacher, a school nurse, a counselor, help and protect children, mental and physical health, the secure world

1. Introduction

MEXT shows that in Japan, schools have found the largest number of bullying. We can say that the role of *Yogo* Teacher, who cares in schools for mental health of children as well as their physical health, is important in helping bullied children. In the world, there must be lots of children suffering from problems which may threaten their mental health. However, I have heard that *Yogo* Teacher is unique to Japan. Then I came up with the idea that more children will be helped if we spread *Yogo* Teachers overseas. I have conducted my research so that children, treasures of the world, can live and grow up healthily.

2. Methods and Results

First, I learned about the definition of *Yogo* Teacher. According to Japanese Association of *Yogo* Teacher Education, *Yogo* Teacher (in Japanese-English dictionaries, a school nurse) is “a special licenced educator who supports children’s growth and development through health education and health services on the basis of principles of health promotion in all areas of educational activities in school.” I asked the *Yogo* Teacher of our school about the role and learned that the term “health” in the definition means both mental and physical health. According to another literature, 55% of the respondents in a survey, *Yogo* Teachers of junior high schools, answered that the main reason of students’ visits to nurse’s rooms was to talk about their mental affliction.

Then, I collected information from people around me. I asked sixty-six of the eleventh graders of our school to write about their experience of visiting nurse’s rooms. One of them wrote, “When I was being bullied, the *Yogo* Teacher gave me a comfortable place to stay at and said, ‘You are a wonderful student.’ I gained confidence and then entered the classroom.” I also got a chance to ask students and teachers from four countries (Malaysia, Saudi Arabia, the U.K. and Germany) about staffs involved in school health in each country. Those from our sister school in Malaysia told me that a Red Cross organization gives first aid, but they do not respond to requests of the children for consultation. In Saudi Arabia, there are no counseling services available in schools. In the U.K. and Germany, nurses and counselors separately take care of the children.

3. Conclusion

The conclusion of my research is that *Yogo* Teacher is indispensable to protect the lives of children from various problems, but we cannot find school staffs like *Yogo* Teacher, who can care for children both mentally and physically. “I think that the advantage of *Yogo* Teacher is to be able to find out the causes of students’ problems from their physical conditions.” This is what the *Yogo* Teacher in our school said to me. The presence of *Yogo* Teacher, not “a school nurse” or “a counselor,” has been paid attention to in the world. I would like to let more people know about it and to help the secure world for children be realized.

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Plastic Waste problem

Plastic Free Life

2722: Chubu University Haruhigaoka High School

2722

Key words: plastic waste,

1. Introduction

In Jun this year 2019, G20 Osaka summit was held in Japan. One of the global environmental issues, plastic waste was put on the agenda and all the leaders of G20 agreed at the summit that they will have stopped plastic waste by 2050. Plastic waste has become a big problem. How much do you know about it?

In modern times, there are a lot of products made of plastics in our lives. Plastic is also often used for disposable products. However the recycling rate of plastic waste around the world is low. Where does non-recycled plastics go? We found that they are collected in one place and left behind for a period or spilled into the sea. The plastics spilled into the sea are now being a serious problem.

2. Methods and Results

China has imported garbage as material and resources from America, Europe, and Japan since the 1980s. However Chinese government announced that they would prohibit importing garbage in 2017 because they contain harmful substances and have a bad influence on the environment of China. So the garbage had nowhere to go and headed for Southeast Asia. Japan had exported about 1.5 million of plastic waste per year until 2017 and half of them were exported to China. However Japan is mainly exporting them to Southeast Asia now. We went to Indonesia and surveyed how plastic waste is processed.

In south Jakarta, there is the system in which local residents can change garbage into money. It is called “garbage bank”. They collect garbage such as plastic bottles and aluminum cans and bring them to the bank. They have their own bank accounts, on which the date and the amount are recorded every time. They can get paid according to the total amount twice a year. They are looking forward to using the reward for Christmas or New Year festivals. The bank is operated by women in the community and financially supported by the municipal government. The bank has a good effect on garbage issues and the awareness of the locals for garbage waste is improved.

3. Conclusion

Our solution which we can carry out is “collecting dead plastic stationeries”. For example, we collect ballpoint pen out of ink in each class and the classes can save up points according to the number. If the excellent class is given an award, students will get motivated and plastic waste will be reduced. And the collected stationary will be reused by underprivileged children in developing countries. By reusing there is no contamination of generating harmful substances.

Plastic waste is not only a problem for us but also a problem for all living things around the world. So, each of us must consider plastic waste and take some actions to solve this problem.

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Awards

Nothing

AI and Japanese Companies

How can companies compete in the global market using AI technology?

2723: Kyoto Prefectural Toba High School

2723

Key words: Artificial Intelligence, AI, global market, engineers, education

1. Introduction

Nowadays, we often hear the word AI (Artificial Intelligence) in many situations. Whether it is voice recognition such as Siri or Alexa, or self-driving cars, AI is starting to play a huge role in society. However, Japanese companies are not adopting AI technology as fast as foreign companies. At this rate, Japan is in danger of being left behind in the global market. In our research project, we focused on the issue of AI and Japanese companies, and tried to find ways that Japanese companies can use AI to compete in the global marketplace.

2. Methods and Results

We investigated this issue by doing background research and interviewing workers in both Japan and Singapore.

First, we looked at the question of why companies need AI technology. We found that companies in industries such as information technology, medicine, and automobiles use AI to efficiently organize and analyze massive amounts of information, and make independent decisions based on it. AI systems are automatic, but human engineers are needed to set up these systems and maintain them. Therefore, having enough AI experts available is critical for companies to make use of AI technology. Unfortunately, Japanese companies are facing a shortage of AI engineers. In 2018, only 11,000 AI experts were available but 34,000 were needed. This demand is expected to rise to 124,000 engineers by 2030, but few engineering students are focusing on AI technology. The Japanese company we talked to in Singapore told us that they do not have enough AI experts, so they are outsourcing to other countries such as India.

3. Conclusion

In conclusion, we found that Japan needs to make greater efforts to increase the number of AI experts available. Therefore, we propose that the Japanese government create a concrete plan to greatly increase the number of AI engineers. As high school students, we hope that Japanese schools will create opportunities for students to learn more deeply about AI. The company staff we talked to in Singapore suggested that students should learn about AI through hands-on activities such as using robots from an early age.

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Awards

None.

The Difference in the Levels of English Acquisition Required by Students and the Society

2724

2724: Kyoto Municipal Saikyo High School

Key words: educational reform, the four-skill type exams, social demands

1. Introduction

The recent reform in the Japanese university entrance examination system, where students are required to take a ‘four-skill’ type of English test instead of the conventional ‘two-skill’ one, has shown a strong social demand on high school students for acquiring *practical* English, which is supposed to function not only in the entrance exams but also in real communications in the globalized society. However, it is also an undeniable fact that some students still stick to, or even prefer, the old trend and try to study solely in the traditional two-skill paradigm, which shows that the students are yet far from appreciating the purpose of the reform and unprepared for the new type of examinations.

2. Methods and Results

In order to research the issue further, we investigated the gap in the levels and the qualities of English education needed by the society and the high school English learners. As for the social demand, we analyzed the discussions at the University Connection System Reform Meeting, as well as the Course of Study for High school English officially published by the Ministry of Education, Culture, Sports, Science and Technology. Then, as for the needs of the students, we conducted a survey at our school, where most students are aiming to enter Japanese national universities, to analyze their real needs for and purposes to take the English education at school.

3. Conclusion

Through the analysis of the questionnaire, we found a general tendency of students to study English solely for the conventional entrance exam. In the poster presentation, further discussion will be made regarding the cause of this tendency and the appropriateness of the logic behind the social demands.

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The Possibilities of Moringa

Approaching to the Hunger Situation

2725 Kyoto Gakuen High School

2725

Key words: Moringa, Sustainable small-scale agriculture

1. Introduction

According to the FAO, it is estimated that one-ninth of the worldwide population lack nutrition for healthy life. While access to healthy diet is stably ensured in developed countries, crucial hunger in developing countries has been getting worse because of several causes. Improvement in people's nutritional condition is necessary, and many organizations as well as individuals tackle this with sustainable development in mind.

2. Methods and Results

Increasing in agricultural productivity leads to maintain foundations such as educational services and hygienic environments. According to the FAO, it is estimated that investments in agriculture are five times more effective than those in other main causes. However, the large-scale intensive agriculture has effects on the environment and broaden inequality in the regions. We suggest a solution that is focused on sustainable small-scale agricultural system that are nature-friendly and community-friendly, using nutrient-rich plant called Moringa. With regard to the system, to begin with, we make small-scale groups consisting of three farmers. Then, we use the plant called Moringa in order to maximize the function of the system we've suggested. This plant is known for its abundant nutrients that two spoons of Moringa include are equivalent to the total amount a person needs per day. Moreover, its water purification effect enables them to ensure sanitary water resources that are vital for agriculture. However, we had an opportunity to realize our defects about this plan through the experience of international conference. This time, we want to approach to the ideal plan.

3. Conclusion

Overall, a dramatic development of agriculture can be expected by investing in the sustainable small-scale agriculture and Moringa. As a result, the quantitative and qualitative progress in agriculture directly contributes to the improvement in health and quality of life of people, thus the reduction of hunger.

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Coming Up with the Sustainable Resources

— Is It Possible for Us to Shift From Contemporary Plastic to Bamboos? —

2726: Doshisha International

2726

Key words: Bamboos, Sustainability (Nachhaltigkeit)

1. Introduction (courses and Maniwa field work)

Use of plastic established a world of consumerism and enhanced our life to be better. Though we benefit from using plastic, simultaneously, issues such as garbage problems arise. It is because we lack considering the environment, also plastic is impossible to decompose without the help of our hands. We went to Maniwa, known for its biomass-based city. It was motivated by the idea we came across. In order to sustain our lifestyle and inherit to future generations, we must find an alternative to the plastic. Although we experienced the benefits of using biomass energy, we learned that their finance, and energy business were still dependent on government investment. Therefore, we decided to learn about sustainable programs, that reflect our lifestyle, and the economic system we have.

2. Methods and Results (Germany field work and Bamboo lecture)

Visiting Germany had a theme of “learn from environmentally advanced countries”. Germany is self-sufficient in providing woods. However, Germany has only 30% of land as forests. The word and idea of “sustainability” has its origin in German. “Nachhaltigkeit”. It is introduced by Carlowitz more than 300 years ago. He mentioned that when cutting down the trees, humans should not cut more than the forest capable of recovering. The environment is not the only factor that qualifies Germany as an advanced country but also, developing cities with the point of sustainability. From these points, Germany encourages its citizens to be more conscious of the problem.

Owing to the decrease in demand for bamboos, as well as an increase in imported bamboos, more than 70% of the bamboo forests are untouched. It is highly likely that the percentage would become larger in time. Yet, bamboos could be used and serve in the same way as any other biomass fuels. Implementing a cultivating technology, into the untouched forests, it could be beneficial to us. It would help reduce the untouched, which would then allow a larger quantity of bamboos would spread. These domestically produced bamboos allow us to cut the expenses. Also, mentioned previously, we could use bamboos rather than using plastic. It would be a first and huge step forward, realizing a sustainable society, with bamboos. Before that, it is necessary to have a better opinion of untouched bamboos, and we must recognize bamboos, in order to use them as a sustainable resource.

3. Conclusion

As we mentioned above, bamboos are sustainable energy capable of being used for biomass energy generation. Also, not only it is environmentally sustainable, but also, it could be economically independent. However, using them as biomass is difficult in the current economic structure we have. Keep in mind that bamboos are replaced by plastic in the past. What this means is that we must understand that plastic was the alternative for the bamboos. Surrender a lifestyle, using plastic, completely is difficult, and we need plastic in our society. Therefore, rather than demolishing plastic, the balance of using bamboos and plastic is important.

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「竹の話色々:2019年、竹の一斉開花!!」

Awards

Improving the medical environment for foreign visitors to Japan: Creating and utilizing multilingual and digitized medical questionnaires

2727: Hirano Senior High School Attached to Osaka Kyoiku University

2727

Keywords: Foreign visitors in Japan, Communication trouble, Medical questionnaire, Multilingualization

1. Introduction

Recently, there is a rapid increase in the number of foreign visitors and workers in Japan. In accordance with this increase, situations or troubles that both foreigners and Japanese face have become more serious and complex. One of the difficulties, which is our main focus, is a communication-problem caused by language differences in medical institutions, and this problem is directly related to their life. There should not be such a situation that they cannot tell their symptoms or condition due to their lack of language skills, but it still can be seen in medical situations in Japan. In order to improve this situation, we started this research.

2. Methods and Results

Out of potential methods for improving this situation, we decided to focus on one approach, an improvement of a medical questionnaire form. That's because patients can use them with ease and low-cost. The first step was the design of a new medical questionnaire form for internal medicine in 10 different languages, based on a medical form that Kanagawa International Foundation provided. As for the language selection, we reflected the number of native speakers and foreign visitors in Japan. The second step was to attach the new medical questionnaires in a QR cord for efficient uses. This process enables users from all over the world to access the questionnaire with their digital devices easily and efficiently, considering a wide use of digital devices throughout the world. The form in a QR cord is also superior to the previous forms, paper-based questionnaires. This is because it can be used without printing out and limiting places to use, containing accurate and huge information within a compact code. The final step was the creation of a poster with the QR cord and an instruction in each language. For the overall improvement of our form, suggestions and advice from a doctor in hospital with many foreign visitors every day.

3. Conclusion

There are many communication-troubles in Japanese medical settings due to the lack of multilingualism. Under this situation, we designed a digital medical questionnaires form in multi-language based on the conventional ones. The further step is to increase the number of available languages, and to create posters with QR cords. The actual application of our questioner form in medical settings is also our goal to improve medical environment for foreign people.

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Zero Energy School

2728: Osaka Prefectural Toyonaka High School

Key words: Zero Energy, Renewable Energy, Global warming

2728

1. Introduction

Global warming has been a serious problem in the world. Our school also consumes large amounts of electricity generated by fossil fuels each year. The research was carried out with the aim of converting all the electric power to the electric power generated by renewable energy. We hope that the results of this study will make zero energy spread into other public facilities and the use of renewable energy more popular.

2. Methods and Results

We visited the Osaka Prefectural Government to investigate the cases of introducing solar power generation in Osaka Prefecture. Based on this, we estimated the effect of introducing solar power generation to our school. As a result, it was found that 50% of annual power consumption could be covered. In addition, we also simulated how much power consumption will be reduced when we replace all the fluorescent lamps in our school with LED tube lights so that we could make the energy use closer to zero. The two results shows us that 50% of annual power consumption could be covered. We also estimated the cost of introducing the system and considered the ways to cover it

3. Conclusion

In order to achieve zero energy, it is important to create energy and reduce the use of it and to secure the financial resources to achieve it. This trial calculation and research should have provided us with a way to achieve these goals. Further efforts will be needed to stop global warming and improve the energy situation.

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Awards

Economic Development and Environmental Destruction

~ Oil Palm Plantation and Deforestation ~

2729 Osaka Prefectural Nose High School

2729

oil palm plantation, deforestation, certification schemes, RSPO, MSPO

1. Introduction

This study aims to make a research on the problems caused by palm oil production in Malaysia and measures taken to improve those issues. Palm oil is widely used in the world, from food to cosmetics. And consumption has been increasing rapidly worldwide. In 2018, about sixty-two million tons of palm oil was produced in the world, and eighty-five percent of it was produced in Indonesia and Malaysia. Japan imports 70% of its palm oil from Malaysia, but there are concerns about environmental destruction associated with palm oil production in Malaysia. One of the measures taken in order to solve the problems is a certification scheme such as RSPO (Round Table on Sustainable Palm Oil) and MSPO (Malaysian Sustainable Palm Oil). In this study we focus on the effectiveness of those certification schemes.

2. Methods and Results

We did fieldwork at Kota Kinabalu in Malaysia in August 2019. Before visiting, we sent a letter to the office of the ministry of agriculture of Malaysia asking for the interviews with them and arrangements to visit some palm oil companies and smallholders. With their co-operation, we could visit several palm oil production sites and the office of the ministry of agriculture to interview some senior officials of the ministry. When visiting the smallholders, some officials in charge of palm oil production went together with us and that made our survey smoother and deeper. Our survey was focused on the environmental conservation measures currently being conducted in Malaysia and their impact on the producers of palm oil.

In the interview with the officials of the ministry of agriculture, we were told they are trying to divert or change agricultural policies from focusing more on palm oil to other crops. They also told us that MSPO certification scheme is to be fully enforced all over Malaysia by December 2019. At one of the biggest palm oil production companies we visited, we found that they take “sixth sector industrialization” and conduct everything from nursery of oil palm tree to palm oil extraction. They emphasize that they are performing environmentally conscious operations at every stage of palm oil production, and are making efforts to meet RSPO or MSPO criteria. When we interviewed smallholders, we were told that great effort is required to continue palm oil production as a private farmer, meeting environmental standards like RSPO or MSPO.

3. Conclusion

Great effort for sustainable palm oil production is being made in Malaysia, and the certification scheme has a big impact. However, it is not easy to spread the certification scheme because there are stakeholders such as the palm oil industry, consumer goods manufacturers, retailers, environmental NGOs, etc., and they have conflicting interests and different views about future prospects. We think the most effective force to realize sustainable production is a collective consumer voice to reject products that are produced without sustainability standards. Our collective voice will play a big role in transforming markets, and eventually production sites. And this will encourage the realization of global standards for sustainable palm oil.

4. References

パーム油白書編集委員会（中西宣夫、青木崇史、森井真理子）（2019）『2018 パーム油白書』認定特定非営利活動法人ボルネオ保全トラスト・ジャパン

How can we protect marine creatures from pollution caused by plastic bags?

Comparison between Japan and other countries

2730

2730: Osaka Prefectural Senri High School

Key words: plastic pollution, marine pollution, plastic bags

1. Introduction

Now, as many as 700 different marine creatures, including endangered species, are said to be damaged by plastic, and urgent solutions are required. It is estimated that plastic supermarket checkout bags are flowing out to the sea also from Japan. So, we started our research on the reduction of plastic bags in Japan. And to find solutions, we did research on how other countries have been dealing with this problem.

2. Methods and Results

To get a general idea of marine pollution and current efforts by countries, we read a reference material edited by the Japanese Ministry of the Environment in 2018.

To compare the measures to reduce plastic bags in other countries and Japan, we read another reference material by the Japanese Environment Ministry and articles on the web that give us detailed information. As a result, we found differences in many governments' approach to reduce plastic bags. Now, 60 countries have already begun some kind of regulation. In England, a tax on plastic bags was introduced in 2015. In Italy, they started charging for plastic bags in 1989 and banned all the non-biodegradable plastic bags in 2011. In Kenya, they started to prohibit using, producing and importing plastic bags in 2017. On the other hand, there are still no such regulations in Japan.

While researching, we found differences in people's awareness. Many people in Europe said that they didn't feel inconvenience about restricting the use of disposable shopping bags because using their own is cheaper and convenient. On the other hand, according to data in 2018, about 40% of Japanese people think that free distribution of plastic bags is not an excessive service.

3. Conclusion

We found that Japan lags behind in terms of regulation and awareness to reduce plastic bags. To raise environmental awareness, environmental education may play a major role. So, our task ahead is to do research on and make proposals on how to introduce the practical environmental education in Europe into Japan.

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English Education in Japan.

~Let's save the teacher of elementary school.~

2731: Osaka Prefectural Semboku High School

Key words: Education, Teacher, School

2731

1. Introduction

Currently, English educational reforms have been promoted because of the educational systems reforms. People say, however, "It's difficult to start new English education for elementary school which cannot afford to hire ALT!" "It's hard for teachers who don't have teacher's licenses of English!" The purpose of our research is to support teachers who are worried about new English education with our knowledge that we have built up through the project studies.

2. Methods and Results

Nowadays, Japanese elementary school teachers have been swamped with work. They have to do a lot of works like teaching lunch manners to students, corresponding to guardians, researching the teaching materials of all subjects. However, their working time decided by nation is 8 a.m. to 4 p.m. even though they cannot finish their work. Teachers have to work for free for hours because of their too much works. It's difficult for teachers to start new English education under such a circumstance. To support them, some educational reforms have been promoted. For example, some universities conduct lectures for teachers, but the number of teachers who join the lectures is limited because of their busyness. Also, the number of teachers who don't have teacher's licenses of English is only 5.4 percent, so it might be difficult to conduct advanced classes for them. Therefore many elementary schools are associated with junior high schools, but it's hard for all elementary schools to cooperate with junior high school. We have conducted research to found out the answer to solve this problem; how elementary school which couldn't correspond to these three educational reforms can catch up with others. It's reference book of guidance. Its advantage is that busy teachers can read reference book anywhere, anytime they want. Aiming for the improvement of student's communication skill of English, we mainly include speaking skill lesson in that. In addition, we made mark seat to make an evaluation of speaking lesson easier.

3. Conclusion

To make these reference book of guidance, we got hints from local elementary school. However, our opportunity to have our own lesson was only once, so we are not sure whether our lesson was appropriate and meaningful for the elementary students or not. Still, we will keep working towards using reference book as a test, in order to research the advantages and problems.

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ministry of education, culture, sports, science and technology

"Heisei 29 Nenndo Eigokyouikujushuujyoukyouchousa no Kekka"

Sakai municipal Fukuizumi Chuou Elementary school / Sakai municipal Fukuizumi Minami Elementary school

Semboku nursery school / Developing and Validating the English SpeakingAnxietyScale:

A Research for English as a Subject of Elementary Schools in Japan

Michiko Kumada, Toshimitsu Okamura/ECC Mr.Matt / "Kodomono Eigoni Doumukiauka"

Kumiko Torikai / "Kensyourensousuru Eigonyuusi speakingdounyuuto minkanitaku" Atsushi Okamoto

Immigrant Acceptance in Japan: How Hiring Foreigners can Benefit the Economy

2732: Senri International Schools of Kwasei Gakuin

2732

1. Introduction

This paper encourages Japanese enterprises to actively hire foreign workers from underdeveloped countries, clarifying how the benefits on both sides outweigh the temporary negative outcome in the long run. By hiring immigrant workers, Japanese companies can enlarge their ability to not only increase their economic opportunities but also help second and third world countries gain momentum in their development in varying elements such as finance and education. This simultaneously helps maintain the company's public image, thereby outweighing the downsides that may occur in regard to differences in culture and linguistic barriers.

2. Methods and Results

The research for this paper was conducted using online sources.

The positive effects that the recruitment of foreigners, especially those from underdeveloped countries has, clearly outweigh the temporary issues revolving around cultural and linguistic differences that the increase in immigrants may trigger. Considering the circumstances that Japan is currently under, such as the issue with the working age population rapidly aging, a reform in the immigration system as well as how people view foreigners is a necessity.

3. Conclusion

The decline in the working age population will continue to escalate and will eventually drain Japan of proficient workers. This crisis affects not only the companies in Japan but also companies worldwide that are associated with them. Fixing the government system and gradually accepting more foreigners now will result in a positive outcome in the near future bringing benefit to the companies in more ways than just finance. The fact that the immediate reaction is predicted to be adverse due to cultural and linguistic differences as well as Japan's neglect toward bureaucratic change as a nation cannot be denied. Overcoming those obstacles, however, through reforms in the immigration systems and the standards of recruitment in each company will result in an overall benefit towards Japanese companies; including but not limited to abstract aspects like public image, market reach, and diversification of products. Not only that, the economic enhancement that the second and third world countries receive as a side effect of this reform on the working population in Japan will help them become competent rivals of companies in first world countries. This growth in competition within the market also serves the purpose of helping the momentum as the development of products intensify. With that said, it is clear that the beneficial outcome of this reform in recruitment for not only the Japanese companies but also the second and third world countries outweigh the temporary downsides that may occur in the process.

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Awards None

Always Be Careful

Protect Your Life Yourself

2733: Kansai Soka Senior High School

2733

Key words: disaster prevention and risk management in an enjoyable way

1. Introduction

These days, as several kinds of disasters occur in Japan and around the world, people feel the importance of disaster prevention more and more. Seeing this situation, we found it necessary to raise awareness of disasters among students in our school. Interviewing them, we found that many thought “Even if disaster occurs, we will be fine.” because Osaka does not have disaster so much and they did not really feel it is their matter. After experiencing 2018 Osaka earthquake, however, students and teachers felt the strong need of disaster prevention. Then, our action started attracting more people. We decided to raise students’ awareness of disasters in an enjoyable way, because many students, feeling bored, are not interested in disaster prevention which is very important.

2. Methods and Results

We made three action plans to raise students awareness of disasters. The three are as follows: 1) Original song “ABC - Always Be Careful,” 2) Disaster prevention session in daily morning meeting of our school, 3) Emergency card. First, we made our original song “ABC - Always Be Careful.” The lyrics of the song is about what to do during and after an earthquake happening. There are important tips and information which we would like students to remember, and making it into a song enabled them to remember the information more easily. Second, we promoted our action plans in morning meeting of our school. Morning meeting is held every morning. Students usually check the schedule of the day. We sang our song “ABC - Always Be Careful” and gave students quizzes about disaster preventions. We also shared the results of our interview to tell the students the importance of disaster prevention. Third, we designed three emergency cards. There are columns to write personal information and emergency contact. People can put the small card in their phone case or wallet. It also has a column to write the nearest evacuation area, so this will be their own disaster prevention card. We distributed the cards in open campus and Environment Festival of Katano city to the participants, approximately 1200 people in total. Through our actions, most of the students in our school (Total over 1,000) are able to remember our theme “Always Be Careful”, and start to take account of disaster preventions as their own issue. In addition, by taking part of the open campus of our school and Environment Festival of Katano, we were able to spread our actions widely.

3. Conclusion

Through our song, students were able to learn disaster preventions without stress. Through morning meeting, we could inform students about our activities and theme “ABC - Always Be Careful.” Moreover, we could promote our activities not only in our school, but also in our region. People who received our cards, put them in their wallets or phone cases. We think that we can take a survey to students to see if they really raised their awareness toward disasters through our action plans. In addition, we are planning to translate our song into English so that foreigners can also understand it and prepare for disasters.

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Storm Surge Disaster Prevention Station

Osaka City Abeno Life Safety Learning Center

「無印良品でもらえる「防災マニュアルブック」を手に入れよう」災害に備える防災グッズ
(<http://saigai-sonaeru.net/taisaku-goods/mujirushi-manual.html>, viewed on 2018.8.15)

The TV industry in 10 years and us

2734: Seifu Nankai High School

Key words: TV industry, streaming service, telework, scenario planning

2734

1 Introduction

TV has a major impact on our lives. It is always in our daily lives, and it plays a big role in creating various kinds of communication and information. However, in recent years, with the spread of smartphones, the existence of video distribution and video streaming services such as YouTube and Netflix has increased significantly, threatening TV's survival. Thinking about what TV can do for it to survive in our daily life will lead to further understanding of our society. We used scenario planning which is used in business from the perspective of a major TV broadcasting company to predict the future of TV.

2 Methods and Results

a. Scenario Planning

Scenario planning is a method to predict the future in business. Based on events that are surely to occur (the base scenario), we chose two factors with high uncertainty and big impact (the driving forces). Using these factors as the axes, we thought about the four quadrants, what happened in each case, and what we could do in that case.

b. Axis

The two axes we chose were "introduction of telework" and "The penetration rate of video streaming services exceeds 60%".

(Horizontal Axis)

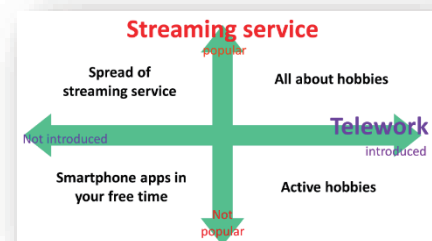
From now on, it is judged that there is a high degree of uncertainty because new work styles such as telework will be promoted as one of the work style reforms, and it may be difficult to introduce them depending on the occupation. Also, we thought that working at home changed the way we used our time, so we thought it would have a big impact on each family.

(Vertical Axis)

Most people in Japan use only one video streaming service at most because the benefits are not communicated. However, since various services have recently entered Japan and the number of users is expected to increase, it is highly uncertain that the penetration rate of streaming services will exceed 60%.

c. Quadrant

- 1st quadrant: All about hobbies
- 2nd quadrant: Spread of streaming services
- 3rd quadrant: smartphone apps in your free time
- 4th quadrant: Active hobbies



3 Conclusion

We must do what we can for now in order to avoid the risk in each quadrant.

International Cooperation: How to Solve Water and Food Issues

2735 Kobe University Secondary School

2735

Key words: global cooperation, matching system, SDGs, water and food issues, Seattle, citizens' awareness survey

1. Introduction

The water and food issues are some of the pressing global challenges. However, research results for technical solutions have not been applied efficiently. Based on the research that was conducted in Seattle as a part of SGH program, the author proposes the idea of global cooperation to reduce risks and achieve the world's sustainable development.

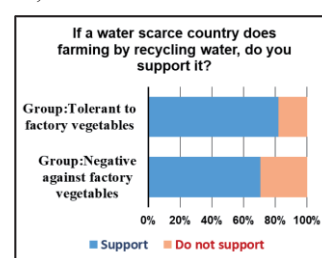


Figure 1: The Result of the Survey

2. Methods and Results

(1) Citizens' Awareness Survey in Seattle

The author observed some global companies and conducted surveys to students in Seattle regarding the development of hydroponics that has recently been successful in helping with water and food issues. Regardless of the discomfort towards “non-natural” agriculture, the citizens' willingness to solve global problems seems high (Figure 1).

(2) Analysis of industry-academia-government collaboration systems

In Silicon Valley, universities make use of knowledge with the financial support of companies. In Silicon Forest, including Seattle, the partnership among the companies is fostered by sharing the information about human networks. Recently, such types of collaborations are being promoted in Japan by universities' voluntary initiatives (Suzuki, 2017).



Figure 2: International Cooperation Model

3. Conclusion

The author chose ten countries and classified them into six types according to maturity of each country and proposed some measures to make full use of new technologies, such as hydroponics and reuse of sewage. The author also proposed a collaborative matching system to encourage industry-academia-government cooperation on the international scale (Figure 2). In this model, seeking of fair arbitration by matching agencies can lead to strong international collaborations. The author concludes that it is important to seek an effective way of enabling sustainable technical assistance for developing countries by considering their histories, cultures, geographical and climate features.

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Key words: media literacy education, critical thinking

1. Introduction

In information-oriented society, various media report some problems which have global influence, so today we need media literacy, the ability of receiving information from the media properly. However, the present media literacy education of Japan isn't clearly written in the Guidelines for the Course of Study and its contents are no better than just how to use the media literacy in order to expand it and make its quality better.

2. Methods and Result

I learned from some papers education both of Japan and other countries. According to one of them, the UK and Canada do media literacy education attaching importance to critical thinking and its curriculums. It can be said that these countries have been working on training practical media literacy.

When I went to the UK, I listened to a lecture on citizenship education from Mr. Davies, professor at York University, and actually experienced it. This education enables students to take part in society because it has political and social factors. I learned the importance of critical thinking in the present day.

3. Conclusion

The class to develop students' critical thinking should be added to the current media literacy education of Japan. Also Japan should introduce citizenship education as a part of media literacy education and educate students so that they can participate in society. I think the education putting emphasis on critical thinking and society in general is essential.

Furthermore, specifying these contents as the curriculum of media literacy and writing this clearly in the Guidelines for the Course of Study will lead to the spread of media literacy education.

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「メディア・リテラシー」教育をめぐる ヨーロッパの最新動向

Comparison of customer service approach for and awareness of vegetarians

2737 Hyogo Prefectural Itami High School

key words: vegetarian, enjoy meals

2737

1. Introduction

Many people from around the world will visit the Tokyo 2020 Olympic and Paralympic Games. However, according to a survey by the Tokyo Metropolitan Government, about 13.1% of foreigners visiting Japan responded that they didn't know if there were vegetarian restaurants. The Japanese food industry needs to improve this situation. As a result of research, there was a difference in efforts between New York and Japan, but there was no big difference in recognition. We will propose a solution for how to spread awareness of vegetarian restaurants.

2. Methods and Results

We surveyed the current situation of US and Japanese initiatives using the Internet. In addition, we interviewed the Japanese Vegetarian Association regarding the current state of Japan's efforts, and surveyed U.S. high school students about the current state of American efforts. In addition, we surveyed high school students for both countries and examined their recognition. One of the questions is "Have you ever had trouble when you went out to eat with a vegetarian? Or do you think that if you go there is something you will have trouble with? ". As a result, the percentage of those who answered "yes" was 29% in Japan and 22% in New York. We discussed these results with high school students in New York. We held a discussion titled "what is the best way to spread restaurants that cater to vegetarians in Japan?" One of the most common opinions was the use of the Internet. In addition, we interviewed two restaurants in New York.

3. Conclusion

There are many vegetarian restaurants in New York, so we thought we could use these as a reference for how to promote vegetarian restaurants. However, we can see that there was no big difference in the percentage of people who are in trouble when going to a meal. Therefore, we thought about how to spread these. There are two solutions that we thought of. The first is to provide services using SNS. If a customer who goes to a restaurant that supports vegetarians writes a good review for the restaurants, they can receive service from the restaurants the next time they visit there. The second is to create a map to support vegetarians. We thought that posting these would reduce the problem of vegetarians not knowing the restaurant.

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<https://inboundnow.jp/media/knowhow/4643/> 2019年11月11日

Consideration of survey results for Filipino who have moved out of the Philippines

What we can do for foreigners

2738: Hyogo Prefectural International High School

Key words: Philippine migrant workers, Japanese immigration policy, High school student

2738

1. Introduction

The purpose of our research is to analyze the results of interviews with Philippine migrant workers, especially those who have migrated to Japan, to clarify the challenges of foreigners living in Japan and to make Japan easy for Japanese people and people from overseas to live together.

The Philippines is known as a sending country for workers in the world. In 2013, the Philippines sent 10.23 million workers overseas. The United States received the most people from the Philippines, followed by Saudi Arabia and the United Arab Emirates.

2. Methods and Results

In November 2019, in cooperation with JAFS(Japan Asian Friendship Society) and KAFS(Khmer Asian Friendship Society), we conducted an interview with 22 people who had worked overseas in Manila, the Philippines. We conducted qualitative data analysis on the survey results.

As a result, 15 Philippine people went to work in countries other than Japan. Ten people from the Philippines went to Middle Eastern countries and 5 to Asian Newly Industrializing Economies or Saipan. When asked if they wanted to work again in these countries, 7 out of 10 Philippine people who went to work in the Middle East answered that they wouldn't go back to work there. In particular, three of the four Filipino women who worked as domestic workers in Middle Eastern countries suffered serious human rights violations including violent abuse. On the other hand, four out of five Filipinos who worked in Asian Newly Industrializing Economies and Saipan responded that they would want to go back to the country if they had the opportunity.

Next, we analyzed seven Filipinos who came to work in Japan. According to previous studies, many Filipinos who came to Japan from the Philippines have settled in Japan. We conducted interviews with Filipinos who came to work in Japan and returned to their home countries, and analyzed what problems they had while living in Japan. As a result of the survey, all the Filipinos who came to Japan answered that they want to go to Japan if there was an opportunity. However, there was a case in which a baby died because the mother couldn't understand Japanese.

3. Conclusion

In order for them to live in Japan, the most important thing for foreigners is to learn Japanese. The Japanese government made a law and decided to give Japanese language education to foreigners living in Japan.

But can we high school students do anything for foreigners living in Japan? We thought about it and implemented what we could do to protect the daily lives of foreigners who came to Japan. We started volunteering to help foreign children study and to teach them the Japanese language.

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Star Anise Peace Project

2739: Keimei Gakuin Junior and Senior High School

2739

Key words: star anise, peacemaking, fund raising, Myanmar

1. Introduction

It will be the third time that Keimei Gakuin has participated in the project founded by Dr. Kentarou Hayashi. This year we were able to harvest star anise for the first time, so we studied how to use them. Our goal is to create employment opportunities in Myanmar and to do what high school students can do to enrich education.

2. Methods and Results

Volunteer high school students gathered for the sales at this cultural festival, and they did everything from sorting star anise items to selling them by themselves. The executive committee consisted of 15 members, including five 3rd graders and ten 2nd graders. First of all, we sorted star anise. Then, we wrote a paper with an outline of the star anise peace plan and recipes using the star anise and packed it with the star anise. The recipe was made with the help of Ms. Kuroda from Asian Bar, a graduate of our school. We made 675 products in total. 560 were sold on the day, and the sales finally exceeded 30,000 yen. Thanks to the sales, many people, including students, parents and local residents, were able to learn about the project.

3. Conclusion

This year marks the first time that star anise has been harvested under the star anise peace plan. At that time, we sold star anise at the school festival. Since we were able to get a lot of people to know about the project, we would like to connect the project with other issues that are different from the one we thought of, so that people who are going to the site next, can think about it. The money raised through this profit-making business could be used as operating funds to grow and harvest star anise fruit in the future.

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Awards

N/A

A Comparison of Human-Environmental Relationships Through Studying *Gibier* in both Japan and Australia

2740: Tottori Prefectural Tottori Nishi High School

2740

Key words: *Gibier*, wild animals, damages, the relationship between human beings and nature, revitalize our society

1. Introduction

One of our local problems is the increase in the number of wild animals like wild boar and deer, and as a result, serious damage to agricultural products. As a solution, our local government has worked hard to hunt and use these animals as meat for food, or *Gibier*. Despite such efforts, the meat cannot reach consumers easily. In order to solve this problem we started to research it through comparing the situations both in our area and in Australia, where a lot of damage caused by wild animals is also often reported. We also made some suggestions to revitalize our local industry and business.

2. Methods and Results

We began by making a questionnaire and conducting research on how much our local people knew about *Gibier*. Then we studied how this problem was dealt with and its supply system through asking experts to explain the wild animal situation in Tottori and doing some fieldwork at local supermarkets and restaurants. Through the study and research we found that local people didn't know much about *Gibier* and had a negative image of eating them. It was also found, however, that some supermarkets sold *Gibier* with recipes, and that some restaurants served *Gibier* meals.

At the same time we studied how kangaroos, which are also a type of wildlife that cause problems, are used in Australia. We did some research and fieldwork in Australia by asking local people how they felt about kangaroos and whether they ate them. Through the research we found that the kangaroo meat supply system was established because local people could eat and buy the meat easily from local supermarkets. We also found that kangaroos are used as a national symbol of Australia and play an important role in tourism.

Through the comparative research and study both in Tottori and Australia, we learned that *Gibier* was not familiar to local people in Tottori. On the other hand, in Australia, kangaroos are very popular among people and there is no negative image associated with eating them. These results led us to suggest that we can normalize the consumption of *Gibier* in Tottori by serving *Gibier* meals in school lunches for elementary and junior high school students, and in high school cafeterias.

3. Conclusion

In conclusion, we learned that the difference in the images and consumption of wild animal meat comes from the relationship between human beings and nature. People seem to understand and accept nature in Australia more than they do in Japan. We'd like to suggest that we learn more about *Gibier*. This will hopefully lead us to consume more *Gibier*, as well as lead to greater tourism by making *Gibier* meals one of Tottori's special local features. It will also lower the amount of damage to agricultural products. The realization of this idea will also create *Gibier*-based businesses, provide employment opportunities for local people and revitalize our society.

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Title : Time is Money

2741: Oki-Dozen Senior High School

Key words: leaflet, local problem

2741

1. Introduction

There are 3 ferries per day to the mainland from Ama Town, Nakanoshima Island where our school is located. They leave at 9:50, 12:40, and 15:15. The ferry which leaves at 15:15 is the only ferry that leaves in the afternoon, and many people board it to return to the mainland every day. We focused on the problem that there is not much information about the area around the ferry terminal for travelers which makes it difficult to fill time until the ferry arrives. After tourists finish eating lunch, they have about two hours of free time. We also heard from the staff of the Ama Tourist Center that many tourists have complained about how to spend their free time in Ama. Therefore, we thought about how we can help tourists have more fun and make lots of memories until the moment they leave.

2. Methods and Results

To solve this problem, we made a leaflet called “Hishiura Walking Map.” We included information on the Hishiura area near the ferry port in the leaflet, like a café, a shrine, the beach, and some other places. We placed this leaflet in the Ama Tourism Center. To check whether the leaflet was useful or not, we also made a survey and placed it together (100 leaflets and 100 surveys in total).

We collected the survey after two weeks. Forty-four people used the leaflets, and 13 people answered the survey. According to the respondents, for the question “Was the leaflet useful?” 86 percent answered YES, and 14 percent answered NO. However, there were few comments as well. We also placed the leaflet in our school library hoping more people would take a look at it.

3. Conclusion

We were able to solve just one of the problems in Ama, and we got the chance to meet new people in the Hishiura community. We intend to place the leftover leaflets in our school library. We also gave our leaflet data to the Ama Tourist Center. Our project became useful not only to our community, but also to people from other places.

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Lowering Maternal Mortality in Developing Countries through Telemedicine

2742: Okayama Prefectural Okayama Sozan High School

Key words: Maternal mortality, Telemedicine, Developing countries, UHC

2742

1. Introduction

According to a 2019 UN agency report, between 2000 and 2017, the maternal mortality ratio (MMR, number of maternal deaths per 100,000 live births) dropped by about 38% worldwide [1]. However, 94% of all maternal deaths still occur in low and lower middle-income countries [1]. We focused on telemedicine as a means to reduce this.

2. Methods and Results

Obstetric care from a health professional during delivery is critical in reducing maternal mortality. The lowest coverage levels tend to be in the poorest countries where maternal mortality levels are highest [2]. For example, in Mandera County, Kenya, only about two in five (39%) births are delivered by a skilled birth attendant, compared to 62% at the national level. In Lon Twai, Myanmar, women living in mountainous areas often deliver babies assisted by families or neighbors. Delayed medical treatment means that pregnant women and babies are often in danger, and therefore, MMR is high. This shows that perinatal care is essential in order to lower maternal mortality. However, there are many areas where access to a hospital is limited due to a lack of transportation infrastructure. Thus, we focused on telemedicine. We visited a medical company in Kagawa Prefecture working in remote islands, mountainous regions, and developing countries. Users of this company's system can have their baby's heartbeat checked by the doctors and learn about their own health conditions. This can be a key to lowering MMR in developing countries. Now, ICT is spreading all over the world, including in developing countries, which suggests that using telemedicine may be effective and promising in numerous regions [3].

3. Conclusion

Many of the world's maternal deaths can be prevented by consultation with a prenatal specialist, and telemedicine can connect pregnant women and medical workers simply and immediately. Therefore, telemedicine may be one way to lower MMR in developing countries.

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Awards

N/A

Promoting Global Citizenship Education: Action, Change & Transformation

SGH Number: 2743 岡山学芸館高等学校

Key words: Primary school education, International Education, Curriculum Development

2743

1. Introduction

With the pace of globalization quickening, the negative effects of this development are being felt even more acutely. In most countries, classrooms are learning to tackle these issues through Global Citizenship Education (GCED), a form of civic learning that involves students' active participation in projects that address global issues. These types of classes though are still only slowly catching on in recent years here in Japan.

2. Methods and Results

We began our research three years ago by examining how GCED is being implemented in various classrooms around the world. In particular, we focused on how global educators are connecting their GCED classes with the U.N.'s Sustainable Development Goals. The origin of our elementary school demonstration lessons coincided with the creation of the SDGs in 2015. Although Japan ranks almost last in global awareness of the SDGs, Okayama Prefecture ranks 1st in Japan in recognition rate, as a result of our longstanding involvement in Education for Sustainable Development (ESD.) Our hope was to continue to increase this number through our SDG-themed demonstration lessons.

To date, we have conducted lessons on SDG Goals 2, 4 and 12. Our aim has been to have children take voluntary steps towards contributing to a better global society and to be aware of the fact that “we are the members of the world” and, as such, should to take positive actions to contribute for the world. We use a variety of quizzes, followed by detailed explanations, to explain to students both the current state of global issues, while at the same time, touching on the subject here locally in Japan. At the end of each lesson, we give time to students to discuss the question, “What can we do for the world?” These discussions always involve a lively active exchange ideas and opinions. We finish by giving students a two week “challenge” based on that lessons theme.

When looking at our survey results, although understanding of the SDGs and accompanying content has only increased slightly over the past three years (68% to 73 %), when asked “Has this lesson made you want to change your behavior?” the number of students who answered “yes” has steadily increased in that same time (91% to 97%.) Furthermore, in the past two years combined, over 85% of the students felt that they could make permanent changes in their daily life. On the other hand though, although 100% of teachers polled said these types of GCED lessons are essential in Japanese elementary schools, only 58% said they were confident enough to conduct these lessons, even if they were provided with a lesson plan.

3. Conclusion

Through this research, we've come to realize that while opportunities to acquire Global Citizenship Education is lacking for children in Japan, their desire to want to know and to take action, is steadily increasing. Going forward, we are planning a more detailed collaboration between a local Elementary School to provide their students with an “SDG Series” curriculum. We will meet with teachers at the school to conduct a workshop on how to create proper lesson plans with the hope that the teachers themselves can then use this curriculum once it's created.

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Realizing the Society that Working Women Can be Compatible with Child Rearing

Aiming at the Society with Various Options

2744 Hiroshima University High School, Fukuyama

2744

Key words: child rearing, women's social advancement, various options, working hours

1. Introduction

Today, Japan lags behind other countries in women's social advancement though Japan is an advanced nation. We take up child rearing to solve it because we think the major fact of it is the balance between work and childcare. Through our field survey in Australia, we researched the differences in child rearing and women's social advancement in Australia and Japan. We want to suggest a realizable solution to our goal.

2. Method and Results

Before the survey in Australia, we set a theme of realizing the society that working women can be compatible with child rearing. Then we went to Australia to listen to a lecture about various views, systems and forms of employment on the Australian child rearing at Santa Sabina College and University of New South Wales. And we sent a questionnaire of the women's social advancement and child rearing in Sydney to make the differences in Australia and Japanese clear. We thought that there is a difference between a view on home and a way of working in Australia and that in Japan. Then we pay much attention to two points of the result of our questionnaire. First is the length of ideal time and real time people spend daily for house work. In Australia there is scarcely a difference of ideal time and real time spent on housework between men and women. However in Japan men answered the ideal time is longer than the real time, and on the contrary, women answered that the ideal time is shorter than the real time. Second is the degree of satisfaction of people's work and support in their company. In Australia, three quarters of all are satisfied with them. On the contrary, in Japan, only half of all are satisfied. From the result, we think today Japanese people tend to be forced to choose between "home" and "working". Through our field survey in Australia, we thought that a flexible way of working can fulfill women's social advancement. In other words, the rate of a way of working in Japan and Australia shows there is no option to adjust the working hours in Japan. While there is various ways of working in Japan, in most cases, the employments are full time employment or part time employment.

3. Conclusion

From these, Australia keeps high total fertility rate and solves m-shaped curve by adopting a flexible way of working. However, Japan can't achieve it. Then we suggest the more flexible way of working as the ideal type of working that companies in Japan should realize. Specifically, our idea is that Japanese companies introduce part-time job to permanent employment and create the environment that people can adjust the working hours suitable for the conditions of their own lifestyle like Australia. Realizing this system of working, we can make the environment that women can adjust the working hours, keeping their permanent employment, and it can probably prevent women from giving up their career.

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Technical education at elementary schools: to break the chains of poverty

2745: Hiroshima Prefectural Hiroshima Junior /Senior High School

Key words: poverty, technical education, skills for agriculture

2745

1. Introduction

The state of the children we saw living in the terrible environment of the Philippine slums was shocking; I was shocked by the fact that many people are living in such a terrible condition. They've been trapped in the "cycle of poverty", which continues across generations and from which most of them can never escape. If we don't take action, the situation can never be better.

We believe if children under such a circumstance can get effective education, they can get out of the "cycle of poverty". As a method of encouraging such children to lead their lives, have future dreams, and to become independent by breaking the "cycle of poverty", we focus on elementary education because the rate of enrollment in elementary education is high even in the impoverished areas. In addition to teaching literacy, we recommended implementing programs to teach technical skills and knowledge needed to work in the future. Implementing such technical education at elementary schools can be effective for widely spreading skills or knowledge that can be useful for children.

2. Methods and Results

75 percent of people suffering from poverty live in agricultural villages. Therefore, we suggest teaching skills that can be beneficial for agriculture by using what they have at elementary school.

As one example, we propose the skill to make "compost". Compost is a mixture of organic substances such as food waste, fallen leaves, and excrement. People suffering from poverty tend to grow crops in poor soil, because they cannot afford fertilizer or do not have enough knowledge or skills to make their soil rich. Compost can be added to soil to help plants grow, which will lead to increased productivity in the long run.

3. Conclusion

When we think about what we can do for people suffering from poverty, we tend to come up with the ideas such as food assistance or donation. It is, of course, important for them, but such forms of assistance are temporary and run short soon. However, when people can learn something meaningful through education, they can have such knowledge forever. We therefore think that education is the assistance we should offer. We propose the technical education at elementary school so that children can not only make use of such knowledge and skills to improve productivity, but also to take one step forward to break the "cycle of poverty" by themselves.

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農業開発／農村開発 | 事業・プロジェクト - JICA++

STEAM×regional revitalization

STEAM integrated in regional inbound

2746: Ehime University senior high school

2746

Key words: STEM, STEAM, science, technology, engineering, mathematics, regional revitalization, tourism, inbound

1. Introduction

The number of foreigners visiting Japan is increasing rapidly; 20 million in 2015 and approximately 30 million in 2017. It is 1.5 times jump up between two years. Also, the places visited by foreign tourists are gradually changing. Up until now, many foreigners districted for urban areas such as Tokyo and Kyoto but now, foreigners who visit the district for sightseeing purposes are increasing year by year. In this research, I revealed the issues that rural sightseeing spots are facing with a perspective of STEAM. STEAM is an educational approach that combines the arts into the more-familiar STEM model, which includes science, technology, engineering and mathematics.

2. Methods and Results

First, to integrate STEAM in the research of tourism, I redefined the meaning of STEAM. Science: Find out patterns and trends of countries/regions with using examples. Technology: Combine scientific technologies in existing system and find out the best way to attract foreign tourists. Engineering: Check the sightseeing maps and guide signs matching to tourists' needs. Art: Create design of maps and guide signs which are easy to understand for foreign travelers. Mathematics: Analyze the data and use it logically. Next, I conducted questionnaire research. I interviewed foreigners who visited Shimanami Kaido in Ehime, Shikoku area. Shimanami Kaido connects Ehime prefecture and Hiroshima prefecture. Travelers can enjoy cycling there. For example, I asked what kind of service was received at Shimanami Kaido, asked about what kind of service they would like to have in the future and the level of satisfaction of the Shimanami sightseeing map. Also, I asked the local people what kind of service they are serving. I conducted an anonymous survey on how much local tourists are positive about number of foreign tourists are going up and what kind of measures they wanted. According to the results of the interview and questionnaire survey, the satisfaction degree with these result maps is low, and there is a lack of environment where freely consultation is possible when troubled during traveling. Finally, I joined "First integrated STEM summit in Asia" as a panelist. The summit was held in the Philippines from November 21st to 24th, 2019. During the summit, I asked a piece of advice to the teachers, foreign students and international communities with questionnaire which I prepared. There are many opinions that says it is difficult to combine science technologies in regional areas though it is necessary to use social media to advertise regional sightseeing spots.

3. Conclusion

To revitalize regional areas, to integrate STEAM in regional inbound, collaboration of local people, tourism companies, government, educators, universities and others are necessary. I propose 4 methods to improve the problems clarified by the investigation. 1, make a guide map of Shimanami Kaido that makes a repeater of it 2, Establish a volunteer guide 3, lecture a simple English acquisition course for locals. 4, promotion activities of Shimanami Kaido by using SNS.

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Catch Your Heart with UCAT

～Activating the Locals from Cable TV～

2747 Uwajima South Secondary School

2747

Key words regional activation, local broadcasting, foreigners, questionnaire, interview, Uwajima

Introduction

Uwajima CATV is a local TV company broadcasting local events to the citizens in the southern district of Ehime prefecture. However, the viewers are relatively limited because most of the programs mainly are reports of events which have already finished. We propose a fantastic new TV program which can attract interests of a wide range of viewers for the purpose of encouraging them to understand more about our city and vitalizing Uwajima with local power.

Methods and Results

(1) Methods

- Research by books and on the Internet
- A questionnaire to the students and their parents
- An interview with the UCAT staff

(2) The result of research

UCAT has a 50 % penetration rate in our students' households. A large number of the people surveyed watch the UCAT program only once or twice a month. That's because the viewers related to each event just watch their own TV program. More than 20 % of the affiliates answered they are not very interested in existing UCAT programs. Around 40 % of the affiliates answered that what they want to watch is the fresh, local information such as gourmet and future events.

(3) Discussion and proposal

As a result of the research, there were many affiliates who want to know more about the local area. Therefore we propose a new TV program to meet their needs of unknown and fresh, local information. That is, "Who is your neighbor?" High school students report about a person living around Uwajima who has a diverse background, prompting a self-introduction and asking the good and bad points of Uwajima. After the interview, the interviewee will introduce the next interviewee. The advantage of this program is that the viewers can touch new aspects of Uwajima through the foreigner's view. At the same time, they have a good opportunity to understand different cultures. So we created a trial model of the program with the cooperation of a familiar foreigner, our ALT.

Conclusion

It is very important and encouraging for the local people to hold the community based media not only for daily life but also for emergencies. Moreover, the future will come soon when we will have more frequent contact with people in different backgrounds. We will realize this plan to share what happens to Uwajima with the local people, acting from the locals to the world.

What We Need is “Passion” for English

- Learning from English education in Singapore -

2748 Kochi Nishi High School

2748

Key Words: English education, passion, Singapore, elementary school

1. Introduction

With the world rapidly globalizing, English is becoming a more and more widely used all over the world. In order to become a global citizen, we need the language and communication skills, and the courage to change. However, we don't think we have enough English skills in Japan. Especially in Kochi prefecture, junior high school students' English skill are lower than the national average. We think that the reason is because English classes in elementary schools are too simple. They need to learn useful English to prepare for junior high school. So we decided to focus on how to improve the English skills of elementary school students. We came up with the idea that having passion or a positive attitude toward studying English would be the best way.

2. Methods and Results

We had the opportunity to have a discussion with one of the professors in Kochi University and then researched the English education in Singapore. We thought that we would be able to adopt Singapore's English education methods in Japan. We talked to the parents of Japanese students who are going to school in Singapore about the advantages and disadvantages of the Singapore's English Education System.

We also wrote surveys on how students like English in both an elementary school and a junior high school in Kochi. We found out that the motivation or the positive attitude for learning English decreased in junior high school. According to the junior high school students, that was because they tend to have trouble in adapting to more difficult English lessons including grammar in junior high school and they start to lose their confidence in their English skills, although they had enjoyed their lessons in their elementary school days.

3. Conclusion

We realized that there are big cultural differences between Singapore and Japan and it would be difficult to adopt Singapore's ways to ours as they are. Although we cannot adopt the methods of Singapore's of English education directly, we can still emulate their way of nurturing students' positive attitude toward learning English – that is having passion for it. If we can fill the English education gap between elementary school and junior high school, it would help students keep their interest and positive attitudes in English learning even after they get into junior high school. So we will continue to look for better ways to improve their English skills so that they can really enjoy English classes with passion. We will also expand our research on English educations in the future.

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全国学力・学習状況調査結果/ 高知県庁ホームページ, 高知県英語教育推進のガイドライン

OECD 生徒の学習到達度調査～ 2015 年調査国際結果の要約～, OECD 生徒の学習到達度調査 (PISA)

Sustainable Regional Reactivation

~With the experiment of “footpaths” with foreigners in Ueki area~

2 7 4 9 : Fukuoka Prefectural Kurate High School

2749

Key words: regional activation

1. Introduction

We focused on “footpaths” from Britain as a way to increase the local activity by the local people. We have been researching on how introducing “footpaths” can affect our area continuously. This year, we proceeded to conduct experiments by using similar methods with foreigners and research how this project affected the local people. We have also researched the change of high school students’ and college students’ communication abilities before and after the experiments.

2. Methods and Results

At first, students learned the basic knowledge about “footpaths” conducted in Britain and Japan. After that, we researched their local area and set the course, and held the “footpaths” tour for foreigners there. We also conducted questionnaires with the local people, foreigners, high school students, and college students. We did free description questionnaires with the local people and foreigners, and with high school students and college students, we asked about their communication abilities. In addition, we actually went to the Britain and did the survey and questionnaires there. The university of Kitakyusyu and footpaths club in Nakama high school helped us do these experiments.

In Britain, we conducted the survey with the users of “footpaths”. We realized that they enjoyed “footpaths” in a different way that is done in Japan. According to the result of the questionnaires done before the experiments, we Japanese use “footpaths” in order to learn the history or find the features of the area. On the other hand, Britain just seem to enjoy walking on the paths.

We also conducted a survey with the high school students and college students on communication abilities. Comparison between high school students and college students shows that their communication abilities are almost the same. However, students who have experienced “footpaths” got higher scores in all items of communication abilities than those who have not. We will conduct the experiment tour on December 15th and consider the data which we will obtain.

3. Conclusion

According to the result of the questionnaires, we realized that Britain and Japan have different ways to conduct “footpaths”. In Japan, the main purposes of “footpaths” are reactivating the local areas and communicating with the local people. We suppose that participants can find the features of the local area through Japanese style of “footpaths”, and foreigners also can enjoy that fully. What we Japanese usually do not focus on will be a good sightseeing resource. Not only for foreigners but also for the local people, there are advantageous points. Through “footpaths”, they can discover the new things that they had not known before and have opportunities for communicating with people. Moreover, according to the data about high school students and college students, there are some possibilities that “footpaths” makes students communicate better. The data verification after the experiments tour with foreigners will be announced on December 22th.

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Inheriting “Kagura”: A Shared Awe of Nature, Bettering the Community Spirit for the Next Generation

2750 Fukuoka Prefectural Miyako High School

2750

Key words: Nature, Tradition, Culture, Local Community

1. Introduction

Unique traditions in an area have their own history and there are good reasons why they are inherited. We became interested in one of our local area’s traditions, “Keichiku Kagura,” a performing art which has been preserved in the Keichiku area in Fukuoka. Our Keichiku area has 30 groups of Kagura performers, most of which have been recognized as important intangible folk cultural assets. However, the recognition of the local community is low and Kagura is facing a lack of successors. Therefore, we are researching an effective and convincing way to spread and preserve it.

2. Methods and Results

We interviewed four groups of Kagura performers and found that its roots are in “Shinto,” the faith that believes God exists in everything and puts significance upon a gratitude for nature. After watching Kagura, we realized that the meaning of Kagura isn’t understood if they don’t know the true meaning of it beforehand. Then, we took part in “Furusato Learning Talk” in an elementary school, which is held for the purpose of getting children to learn more about local culture. We learned about Kagura there and found that mediums like “kamishibai,” which is a picture-story show, are effective ways to promote leaning about history, culture and nature in the region.

Therefore, we decided to create our own original kamishibai to demonstrate the real appeal of Kagura. We read it in a local elementary school, and we also had the chance to read another kamishibai to college students in Malaysia, which was about the costumes and dance of Kagura. In both cases, many of them told us that they enjoyed it and we found that even children or people from different cultures can understand the stories of Kagura. We then placed our display on Kagura in the corner of the town library. According to our survey, many people learned more about Kagura.

3. Conclusion

In our research, we realized that kamishibai shows and displays in the library are effective in conveying the meaning and the reasons for the existence of Kagura, which people rarely understand when they see the dance alone. We think a detailed description of its origin and its purpose to entertain as well as specific terms for Kagura helped to deepen their understanding better than just watching the Kagura performance. Our traditional culture attracted people’s attention regardless of borders, culture or country by telling stories. In the future, we would like to make an effort to create more opportunities in our area in order to get more people learning about Keichiku Kagura.

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The effect of Capsaicin on pneumonia

The capsaicin jelly heightens the QOL of the elderly

Number 2751: Fukuoka Futaba High School

2751

Key words: SDGs, QOL

1. Introduction

These days the aging of the population is proceeding rapidly, which heightens the importance of QOL of the elderly. To ensure a high QOL for the elderly, having a healthy body condition is one of the most important factors. Therefore, we decided to work on aspiration pneumonia, which is a lung infection that develops after you aspirate food, liquid, or vomit into your lungs.

The reason why we chose aspiration pneumonia from the various types of pneumonia is that the elderly population gets this disease easily, recurrence is very likely, and patients of this disease cannot eat what they want to eat, which leads to a low QOL. Moreover, because pneumonia is the fourth highest cause of death, by preventing this disease, we will succeed in achieving the SDGs number 3 goal, good health wellbeing.

2. Methods and Results

Chili peppers contain a substance called capsaicin, which has been scientifically proven as an effective treatment for aspiration pneumonia. TRPV1 receptor, which is located peripheral nerve of mammals, will be stimulated by capsaicin. When TRPV1 is stimulated, aspiration is less likely to occur.

Our goal is to make it more accessible for the elderly to take capsaicin. There are already film-like products made of capsaicin to ingest. However, these are too expensive to take in daily life and not very safe for the elderly. Thus, we decided to produce a jelly-like product containing capsaicin to make it safe and easy to take. First, our product was so hard that it will not prevent choking. Therefore we altered the containing and succeeded in making a safer product, which is a jelly-like beverage rather than a jelly.

3. Conclusion

The process of making the product was not easy, however, by a lot of trial and error, we succeeded in making a product that is safe, low-cost and easy to produce.

It will significantly contribute to a higher QOL for the elderly population, which is increasing year by year. This will eventually lead to increased happiness in all societies in the world.

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Awards

Save the Earth with Indoor Shoes!

Make the Shoes Needed by People and the Environment.

2752: Meiji Gakuen

2752

Key words: indoor shoes, protection of environment, plastic garbage, reuse

1. Introduction

We have two reasons for developing indoor shoes. First, the indoor shoes that we usually wear are dirty and are troublesome to take home and wash. Second, environmental issues regarding plastic waste are becoming more serious. We want to make indoor shoes which can solve these two problems at the same time. The purpose of our research is to create shoes that are difficult to get dirty, contribute to the improvement of environmental problems, and to raise awareness of environmental issues.

2. Methods and Results

- ① We conducted an opinion survey about our indoor shoes at school, and had an interview with some students to ask about how they take care of their shoes.
- ② We searched the Internet to find a material for the indoor shoes which is difficult to get dirty and learned that teflon finishing, which our indoor shoes are already made of, is thought to be highly effective.
- ③ We visited the factory of Moonstar, Inc. to learn the manufacturing process of indoor shoes. We then gave them our development plan using plastic derived from recycled plastic waste and asked them to develop a prototype.
- ④ We tested the prototype at school for a week and then made an improvement plan to send to the company.
- ⑤ We created a product made from a material that shows less dirt and that is coated in plastic which is easy to clean. With an easily-washable cup insole that covers the entire foot, it is both convenient and comfortable to wear.
- ⑥ In cooperation with Moonstar, Inc., we aim to realize the product after further improving upon it.

3. Conclusion

We found that it is feasible to realize indoor shoes created using recycled plastic waste. We would like to increase the users of our indoor shoes and for more people to become aware of environmental issues. We also want to consider life without plastic and realize it.

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We want to drink tap water while traveling abroad

SGH Number 2753: Nakamura Gakuen Girls High School

2753

Key words: Water safety, Plastic waste, Water filter, Global issues

1. Introduction

We visited Malaysia for our field trip last October. During our visit, we were very surprised by the situation of not being able to drink tap water, unlike in Japan where we can easily drink it. And so we started to think how nice it would be if the local people of Malaysia do not have to worry about the safety of tap water and drink it anytime they want.

2. Methods and Results

From our trip and through interviewing the foreign exchange students in our school we found out that most foreign people have a concept that tap water is not safe to drink. For these people, easy access to water is to buy a pet bottled beverage. It seems pet bottled beverage is safe to drink, but it leads to several global issues such as plastic garbage, suffering of animals and health problems due to too much sugar or food additives and preservatives in the beverage. So providing pet bottled beverage is not a good choice.

Also, by not purchasing any pet bottled beverage, we can reduce great amount of plastic waste. Securing the clean water leads people to lead healthier lives. So we would like to suggest portable filter to teenagers in other countries and spread the idea. We have a school event named “Food Summit” every year where we welcome high school students from different countries to discuss about global issues and their solutions about food in world. During this event we believe Food Summit next year will be a good opportunity for us to present about our idea “portable filter” so that students from other countries can bring them back home and share with the people back in their countries.

3. Conclusion

We never thought about how lucky we were to be able to access the clean water anytime we want, wherever we are. The concept of portable filter is not only to provide clean water to those who cannot access but to also reduce waste and to stay healthy. We believe that we can make our world a better place by doing so.

References

We interviewed AFS (foreign exchange students) at our school and also local Malaysians in Malaysia.

Awards

To make the society everyone live comfortable without discrimination through the Civil Partnership Act

2754 Nagasaki Higashi High School

2754

Key words: the Civil Partnership Act (CPA)

1. Introduction

Our research interest is how to recognize gender equality. Today, “gender is not treated equally.” as is stated in the Sustainable Development Goals issued by the United Nations. Since this is a major topic that needs to be addressed worldwide, we find it worthwhile tackling this problem. Furthermore, this past September, our hometown, Nagasaki City, introduced the Civil Partnership Act (CPA), under which one couple, both considered as sexual minorities, married. However, we learned that the newly-married are still fighting against the biased idea about sexual minorities, which made us think how gender should be treated. Thus, our team decided to search for a way to solve the gender problem focusing on the CPA.

2. Methods and Results

First, we visited the Nagasaki City Human Rights Gender Equality Room to investigate the circumstances concerning the CPA. We learned many things regarding the CPA such as why it was adopted, what problems are found in adopting the act, and what opinions people have about it. Next, we surveyed twenty-seven municipalities which adopted the CPA through questionnaires. Of those surveyed, we found that the CPA introduced in Chiba City is outstanding: the Chiba CPA does not specify genders. That is, Chiba’s CPA supports marriage only by the agreement of the two involved regardless of gender. We thought it is the true form of the CPA, because it treats all genders equally. In addition to surveys, our team is also planning to interview the first couple who married under the CPA in Nagasaki and those who are working in a local organization that is fighting for gender equality. Through these methods, we hope to find a good solution to gender inequality.

3. Conclusion

We concluded that gender equality is achievable through the CPA similar to that of Chiba City. The Chiba CPA treats genders equally by not specifying genders as a constituent of legal marriage. This, we believe, will surely contribute to create a society where genders are treated equally, and extending this movement will change the world for the better --- a world where everyone can live as they are regardless of gender.

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Possibility of the compost

～Improvement of odor for the further spread～

2755: Miyazaki Prefectural Miyazaki-Omiya High School

2755

Key words: composting garbage

1. Introduction

Today the garbage problem is very serious all over the world. Especially, we throw away a lot of food. But there are limits on the reduction of the amount of garbage and there are parts of food that you cannot eat.

We think that we can reduce the amount of garbage by using composters. But many people do not use composters because of their odor. So we have studied what kind of deodorant is the most effective for the reduction of the odor of composters. In addition, we researched whether composting garbage has economic and social value.

2. Methods and Results

In the experiment, we clarified the effects of deodorants. The purpose is to investigate the most effective deodorant for composting. We put 100g of garbage in flasks and added the different amount of deodorant to each. Then ten students smelled the samples for two weeks and evaluated the odor with the questionnaire. The result shows that coal and citric acid are very effective to reduce the odor. And the effect of coal depends on its quantity while citric acid does not.

In the social research, we researched whether composting has economic value or not. We calculated the budget for garbage disposal from budget for waste disposal in Miyazaki city. We also calculated the amount of garbage that a single household produces in a year, the cost of processing it, and the amount of money saved by composting. The result shows that, if all garbage in Miyazaki city could be composted, it would result in a budget elimination of about one billion yen per a year and a daily composting in an average household results in saving 357yen per a year.

3. Conclusion

In the case of composting at home, it is better to use coal and citric acid as deodorants because they showed excellent results. The deodorizing effect of coal is related to its quantity. On the other hand, we cannot see the correlation between the deodorizing effect of citric acid and its quantity.

Composting can change garbage into fertilizer. They also have great economic value in terms of saving a lot of tax. As a new solution to the serious garbage problem, it is necessary to use composters in order to realize a sustainable society.

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Awards

第2回京都大学ポスターセッション2018 優秀ポスター賞

Raising consumers' awareness of plastic issues through ethical education in Ichikikushikino City

Key words: marine plastic, ethical, awareness, class, consumer

1. Introduction

It is estimated that by 2050, if no action is taken to improve current marine plastic conditions, there may be more plastic present than fish in the ocean. Due to this marine plastic, pollution and degradation of the ecosystem are occurring at a rapid rate. Research shows that Japan is responsible for the second most plastic waste per capita in the world. Therefore, this report looks at ways to improve consumers awareness of plastic issues, thereby introducing more ethical consumption of plastic, and disposal of plastic waste. In particular this study focuses on plastic issues present within Ichikikushikino City. The solutions found in this city can then be applied to other areas with ongoing plastic issues.

2. Methods and Results

The research conducted in this report recorded the amount of drifting garbage on 4 seashores in Ichikikushikino City. A total of 15kg of garbage was collected and separated into 9 different classification types. Figure1 demonstrates the results of this analysis, showing the ratio of plastic material compared to other material found in the garbage at each seashore. Additionally, a survey was given to 300 consumers in Ichikikushikino city in order to find out the habits and awareness relating to plastic issues of people within Ichikikushikino City. It was found that many people in



Figure 1



Figure 2 Figure 3

Ichikikushikino City are not aware that plastic pollution is an issue and

therefore do not make any attempt to reduce their plastic consumption (Figure2). In fact, it was

found that number people who did not know about marine plastic issues was more than the

number who did (Figure3). Finally, an interview of the Kagoshima Environment Bureau and

Kushikino Environment Center was conducted to find out about the current situation of recycling in Ichikikushikino City and to learn the importance of the 3R's; Recycling, Reusing, and Reducing. It was found through these interviews that the recycling rate in Ichikikushikino City is only 8.2%. When considering the recycling rate of 82% in Oosaki City, this is a very small rate and measures need to be taken in order to improve it. Therefore, in order to improve awareness of plastic issues in Ichikikushikino City, the results of this research will be used to direct an educational class about plastic.

3. Conclusion

It was found that a large percentage of drifting garbage in Ichikikushikino City is plastic waste. In addition, the awareness of plastic issues of people in the city was low. People did not recognize marine pollution caused by plastic waste. As previously stated, now that research has been conducted in Ichikikushikino City measures can be taken to improve the awareness of people in the city. Future research on this topic will consist of the implementation of an educational class on these plastic problems. The class will then be surveyed in order to see how their awareness has changed after taking part and if their behavior relating to plastic consumption has improved.

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Awards

九州大学アカデミックフェスティバル 2019 将来の夢を切り開く“高大連携”世界に羽ばたく高校生の成果発表会 優秀賞

Why do people who live in Kesennuma feel less connection with the sea than before? What you can learn from “Kekousei”

2801

2801: Koki Sato Kesennuma High School

Key words: Umibanare; People who are not interested in the sea or do not have a chance to go to the sea.

1. Introduction

Marine plastic waste is known as a global social issue all over the world. Also, I think Umibanare of Kesennuma is a problem too. If we cleaned the sea, Umibanare would be solved. But the current situation is not resolved. I have an idea of my own. It is that people are not interested in the sea and they do not have a chance to go to the sea. Also, I think people are not friendly to the sea, so a lot of people throw trash into the sea. Therefore, I checked the situation of the sea in my town. As a result, I understand that there is a reduction of beaches in Kesennuma City and reduction of fishery population. So, I investigated about Umibanare based on the questionnaire.

2. Methods and Results

First, I constructed a hypothesis. It is when we were children, there were few memories of the sea and the number of visits. So I asked three questions to second year students of Kesennuma High School in the questionnaire. The First, “Are you very familiar with the sea?”. The Second, “How many times did you go to the sea when you were in elementary school?”. The third, “Do you have fun memories from the sea?”. From the result of the questionnaire, the first is: 90% were familiar with the sea. This is higher than teenagers of Japan. The second is: people who are friendly to the sea are many people who went to the sea many times when they were in elementary school. It was as I expected. Also, people who are not familiar with the sea went to the sea. I was surprised by them. The third, both people had the same fun memories, bathing. It is effective for us to handle them. Also, there was an opinion that there was no opportunity to go to the sea. I understand that people are not interested in the sea in Japan than before from questionnaire of “Nihonzaidan”.

In addition, Kesennuma’s surfers clean up the beach once a month. They were praised by the prefecture for their action and an NPO corporation “Hamawarasu” who gives a place where children can play with nature.

3. Conclusion

I have compared teenagers of my town with teenagers of Japan. I understand that teenagers who live in Kesennuma are friendly to the sea more than other teenagers in Japan, and have gone the sea many times when they were in elementary school, and have fun memories of bathing. Therefore, the hypothesis did not hold. However, I think it is good, because it is most important to be familiar with the sea. They just have no chance and purpose to go to the sea.

How do people gather in the sea? I suggest events where many people play safely and freely at sea. For example, “Gomihiroi game”. People clean up the sea as a game. They can notice that there is so much garbage when they go there. Many people will want to clean the sea, from adults to children, as well as surfers. If our sea becomes beautiful and safe, adults will want to let children play in the sea. I think that issue of marine plastic waste may be settled at the same time. I believe that we can change global social issues into familiar problems through nature.

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<https://www.qkamura.or.jp/kesen/>

Awards

N/A.

Study of Tourism, Ethnic Culture and Language Education Comparing Sarawak, Malaysia and Japan

2802 Tochigi Prefectural Sano Senior High School

2802

Key words: Tourism, Ethnic Culture, Language Education

1. Introduction

Until last year, our school's SGH club conducted fieldwork in Taiwan, focusing on the tourism industry of Tao-mi village and comparing it with that of Motegi-town, Japan. This year we have broadened our horizons in this research and focused on Malaysia, one of the successful multi-ethnic countries. In particular, we wanted to compare "tourism", "ethnic culture" and "language education" in Sarawak with those of Japan.

2. Methods and Results

We visited Sarawak Cultural Village, Analyze Village and exchanged St. Teresa High School, Sarawak University.

Tourism: Although they are not trying to incorporate the knowledge economy, they are getting tourists by showing the village tradition.

Ethnic Culture: There is mutual understanding among multi-ethnic groups, including ethnic groups that were hostile to each other in the past, and the culture of ethnic groups is preserved.

Language Education: There was a government-developed English education system. In addition, we were able to realize the difference in children's consciousness in learning English and the various opportunities to experience minority languages.

3. Conclusion

Tourism: We could find that the purpose of the tourism industry in Malaysia is different compared to those of Tao-mi village and Motegi-town, which was the main subject of last year's research. However, Analyze village seems to be successful in tourism. So we speculated that even if the purpose of tourism is different, the fundamentals of tourism will not change. It is necessary to compare with other model cases from now on.

Ethnic Culture: Many ethnic groups which used to be in conflict in the past are now living together. We speculated that the education to deepen mutual understanding among ethnic groups was given to the children from an early age. We will focus on education and further research is needed from now on.

Language Education: Provide education that is conscious of the need for English, such as conducting some classes in English. We also speculated that children are interested in languages because they have many opportunities to interact with languages other than English, such as minority languages. More research is needed from now on about what classes are taught in English.

4. References

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- 「マレーシアの教育」 財団法人自治体国際化協会

Key words: Vietnamese Industrial Trainees Japanese Language Education

1. Introduction

Over 120,000 Vietnamese industrial trainees are working in Japan today. They are facing serious problems, with 3,700 workers on the run. One of the reasons for this is their poor Japanese ability. The language ability greatly affects their stay. Specified skills visa, which enables Vietnamese workers to stay in Japan a maximum 5 years length, requires the workers to pass the N4 level of the Japanese Language Proficiency Test (JLPT). Also many trainees have communication trouble in their workplace. Unless this problem is tackled immediately, the situation will worsen, in the form of more illegal immigrants or an increase in the crime rate.

In order to solve this problem, we carried out the research into the situation of Japanese language education in Vietnam. We would like to propose a solution to improve the situation in Vietnam before their departure to Japan and therefore help trainees to integrate more easily into Japanese society. This is to achieve SDG #4, "Quality Education."

2. Method and Results

To understand the reason why Vietnamese industrial trainees have poor Japanese language ability, we conducted three interviews. On our study tour in the summer 2019, we interviewed Vietnamese university students at Vietnam Japan students Café, in Vietnam. We also conducted the interviews at the Vietnam Association and JICA in Japan. Through the interviews, we have found that many trainees are from the countryside in Vietnam and that Japanese language education environment is totally different from that of major cities. While there are highly appreciated Japanese language schools in major cities, there are few opportunities available in those areas.

3. Conclusion

In order to solve this problem, we propose an increase in opportunities for Japanese study in rural areas in Vietnam. This is intended to raise workers' proficiency to the JLPT N4 level. Our plan is to provide the area with the place like "Vietnam-Japan Institutions for Humans Resources Development (VJCC)". VJCC is managed by JICA and provides Vietnamese people with excellent programs of training and studying. At present two institutions of VJCC are located in Ho-Chi-Min and Hanoi.

We can make use of classrooms of existing schools in the area, which can save on the rental of learning facilities. In addition, we can offer lessons via videos. This is because Japanese instructors are difficult to find as the wages instructors can earn are very low. In order to make lessons interesting, native language teachers, who live in major cities, should be invited occasionally. With these plans, potential trainees will have more opportunities to learn Japanese even in rural areas, which will help them pass the proficiency test, lead to fewer communication troubles in their workplace and make it easier for them to adjust to Japanese society.

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The garbage saves the world

2804 : Sakura high school

2804

Key words

garbage moisture dry

1. Introduction

Garbage sharing for about thirty percent of household waste has so much water.

It account for about eighty percent of garbage.

Therefore, it needs extra energy when garbage which has a lot of water burns at incinerator.

And it has bad effect on environment. So we started to research about reducing moisture of garbage.

2. Methods and Results

According to the survey, we found that desiccating garbage is the best way to resolve this problem.

Also, we sent questionnaire to junior high school students and their parents. Most of them didn't dispose of garbage.

And they are interested in removing moisture of garbage now.

3. Conclusion

Desiccating garbage is not common way because it requires great care.

Thus we are planning to make leaflet which introduce some easy ways to reduce moisture of garbage and benefits that desiccating garbage can give the house person.

Finally we want to share these ideas with many people. We are sure that it will make good effect to the environment if many people start these ideas.

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Awards

16.3.2019 10th presentation of SGH research in Chiba Institute of Technology

“Génie oblige!” inspired by Franz Liszt

2805: The Music High School Attached to The Faculty of Music, Tokyo University of the Arts

Key words: Franz Liszt, Génie Oblige, Saint-Simonists,

2805

Introduction

The this theme is: “What mission as a musician we can learn from Liszt.” Franz Liszt was a Hungarian composer and a virtuoso pianist of his time. We have researched the achievement and impact he had on those who came after him. This September, we went on a school trip to Hungary and Vienna to visit Franz Liszt academy of music and Franz Liszt memorial museum and by that, we got interested about what Liszt did to the society by his music and also in his life. So, we researched about his life and we gonna think what we should do as a professional musician.

Methods and Results

We have proposed three questions for this research:

- 1) What did Liszt achieve as a musician, according to his motto “Génie oblige”? “Genie oblige” is a French phrase meaning of genius people should use their talent for the benefit of mankind.
- 2) What development or sophistication have musicians today gained from Liszt?
- 3) What can we do as a professional musicians to the society inspired by Liszt in the present and the future?

For these research questions, we have extracted data from a number of literary sources, and interviewed two people. The former is Mr. György Ádám who is a renowned Hungarian pianist performing in concerts around the world, and is currently the “Liszt Ambassador” The latter is Prof. Kenji Watanabe of Tokyo University of Arts who had graduated from the Liszt Academy of music.

As for the first question, we have found that Liszt set forth his spirit of “Génie Oblige(genius people should use their talent for the benefit of mankind)” whilst close contact with the Saint-Simonists. Then in 1875, Liszt founded his Hungary royal academy of music to share his talent with younger people. Meanwhile, when there were devastating floods across Europe, Liszt held charity concerts and had widened his philanthropic effort. We can see that he has not only benefited the musical society, but had contributed to the society.

Regarding the second question, interviews with Mr. Ádám and Prof. Watanabe have revealed that they both admire Liszt as a revolutionary figure and fully respect his philosophy of “Génie oblige”. Both of them also believed that those with musical talents should find their own individual way of how to contribute to the society beyond boundaries.

For the final question, we have noticed that there are multiple areas in the 17 SDGs global objectives where we can contribute to the society as musicians. Music has unlimited possibilities such as touching one’s heart, and therefore is to be utilized for promoting welfare and education which can overcome the disparity between poverty and wealth. And as a Japanese, we should inheritance the traditional music and we should tell the splendor of music and it has a worth to tell posterity.

Conclusion

Through this research, we have come to the conclusion that in this ever changing society and it is important for us to explore and implement versatile measures which can contribute to the society.

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Senior citizens can support the youth to escape from relative poverty

2806: Soka Senior High School

Key words: relative poverty, university entrance exam, NPO

2806

1. Introduction

Recently, the issue regarding the poverty of children and women, which was seldom discussed, is now being argued as a controversial topic in Japan. Yet this type of poverty, known as relative poverty, is not being recognized easily by Japanese, especially among young Japanese people who are not in poverty, because it seems to fulfill the criterion that is demanded for human beings to live normally in a particular society compared to absolute poverty. We would like to research “Japanese single mothers and relative poverty”, pondering on how to solve this Japanese society’s complicated problem and how to recognize this problem in Japanese society. Investigating this topic through methods such as interviewing a non-profit organization (NPO), our hypothesis is “Educational NPO activities based on local facilities for students who are in relative poverty, can contribute to alleviating to Japanese relative poverty, boosting the university registering rate”.

2. Methods and Results

To investigate our hypothesis, we researched three issues related to relative poverty. The poverty rate of single mothers, the circumstances of children in a fatherless family, and an NPO to aid children living under relative poverty.

First of all, we researched the poverty rate of single mothers. According to the OECD’s gender report, the income of women who raise their children, is far lower than women who do not have children or men’s income. This gap of income is called woman’s “Mother penalty”, which is the highest rate in the OECD countries. This severe financial disparity causes and expands the poverty of single mothers.

The second issue is the situation of adolescents of fatherless families. High school dropout rate is higher among children in relative poverty, because, usually high school students must engage in part time jobs in order to make ends meet of their family. As we showed in the first reason, the poverty rate of single mothers is very high, so these statistics show that children from fatherless family are liable to quit before entering university.

At last, here is an explanation about an NPO. We thought that increase of university entrance rate can boost the number of regular employment. Our idea is this; Establishing an NPO to support poor students’ challenge to enter the university. We added two ideas with the result of the research of an NPO. First one is, giving students a meal even in the night by collaborating with companies such as food bank. The next one is; making a significant class by convening retired professors and students in an internship of universities. This type of NPO will help high school students enter university.

3. Conclusion

We finalized the solution that “Establishing an NPO to give opportunities will high school students suffering from poverty, to learn freely, in order to boost their university entrance rate”. In this NPO, teachers who had retired or university students teach students. Further, the NPO creates an environment to eat dinners comfortably by collaborating with food banks so that students could get enough nutrition in a meal. Increase of university entrance rate lessens the rate of single mothers from being in the relative poverty in Japanese society. Consequently, the reduction of Japanese relative poverty can be expected by activities and prevalence of these types of organizations.

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Japanese Countermeasures against Water Shortage in Times of Disasters

- From Cases in Japan and Palau -

2807: Takatsuki Senior High School

2807

Key words: disaster, water shortage, water reserves, volunteer, Palau

Introduction

In Japan, we face many kinds of natural disasters such as typhoons, torrential rains, and landslides every year. They cause great damage to communities in Japan. People in disaster-stricken areas have a hard time securing water for daily use. When they cannot obtain enough clean water, disaster victims will suffer various health problems: dehydration and many different infectious diseases. Any people need to get clean drinking water in a time of disaster. That is the reason why I investigated this global issue.

This November, I visited the Republic of Palau to see their countermeasures against disaster. Nowadays, Palau has been suffered from large-scale typhoons. The country's food and water supply heavily depend on imports. Thus, people in the country cannot have a sufficient number of essential commodities of life once a typhoon strikes the islands.

I researched countermeasures against water shortage which had been adopted by the Japanese local governments and the Palauan government. From my investigation, I propose actions and preparations in case of water shortage.

Methods and Results

I mainly used three methods for my research: finding articles, doing interviews, and distributing questionnaires. When I looked into various sources for water shortage problems, I found some valuable pieces of information. They are disaster information from the Cabinet, news articles, and an attitude survey in Nishinomiya City. In the Republic of Palau, I interviewed government officials and people in Peleliu Island, a small island very far from the main island. In the country, I distributed questionnaires to high school students. Through interviews and questionnaires, I found out how the Palauan deal with water in their daily lives and how they introduce disaster prevention measures, especially to water shortage.

Through my investigation, I found the following things. First, the Japanese do not have enough stocks of water in case of water shortage. Second, the Palauan store up water in case they lack water. Third, Government officials and volunteers must cooperate to reconstruct disaster-hit areas and set up evacuation shelters,

Conclusion

Japanese people do not have enough stocks of water compared to people in Palau. We can reduce damage of an insufficient supply of water if we are well prepared for disaster. Therefore, I propose how local governments, volunteers, and communities can cooperate to deal with water shortage problems before and after disaster occurs.

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Spread the Disaster Prevention Calendar Around the World

2808: Wakayama Prefectural Hidaka High School

2808

Key words: disaster prevention, normalcy bias, calendar

1. Introduction

The background of our project is as follows:

- 1) In Wakayama Prefecture, natural disasters have been caused by typhoons, tsunami, floods, and so on.
- 2) Huge natural disasters by the Nankai Trough Mega Earthquake are expected to occur in the near future.
- 3) Most of us are affected by normalcy bias.
 - a) Reference in academic papers *1
 - b) Reports by news *2
 - c) Questionnaire results at our school

2. Methods and Results

We set the challenge of how normalcy bias can be removed through a series of hypotheses.

Hypothesis 1: We should take classes to enhance awareness of natural disasters and crisis.

Validation 1: Experiences tell us that our awareness has been elevated just after we listen to lectures at school but it decreases with time. To keep the awareness enhanced, long-term learning will be effective rather than short-term learning.

Hypothesis 2: Regular exposure to information will be effective.

Validation 2: We combined a calendar with information on natural disasters and made it into an original “Disaster Prevention Calendar”, and proposed it at our school, the city government, and the prefectural government. It was valued positively there. We put the calendar on a bulletin board at school, and the calendar on our website was linked to the official websites of the city and prefectural governments.

Hypothesis 3: A “Disaster Prevention Calendar in English” will be necessary. The Ministry of International Affairs and Communications manages internationalization by developing “Information Coordinators to Support Foreigners in Times of Disasters”.

To produce a multi-lingual Disaster Prevention Calendar and distribute it everywhere is important so foreigners can accumulate essential information in their daily lives.

Validation 3: We created a 12-month disaster prevention calendar in English by translating a calendar in Japanese literally into English. However, our work has stopped there. We have not yet distributed the calendar.

Hypothesis 4: A multi-lingual calendar will be more favorable for people from abroad. Putting information unique to each country in each language on the calendar will make it familiar to foreigners and will be a cue for foreigners to talk about disaster prevention in their daily lives.

3. Conclusion

Conclusion 1: Combining a calendar with natural disaster prevention is significant.

Conclusion 2: Creating a multi-lingual Disaster Prevention Calendar and distributing it around Japan will help provide foreign residents with information about natural disasters and will be the first step to disaster response for foreigners and to realize a multi-cultural society.

We would like to eliminate normalcy bias, but to make sure to realize the second conclusion above. Cooperation from you all in this hall is necessary. Let’s make multi-lingual Disaster Prevention Calendars together!

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Awards

None

Manufacturing simple devices for hydroponics to produce leafy greens effectively

2809: Saga Prefectural Saga Agricultural High School

Key words: hydroponic, LED lights, labor shortage, circulation culture, sustainable society

2809

1. Introduction

This year, we have researched how to raise farm products stably through the fieldwork. We can say that hydroponic devices is one effective way of solving labor shortages. Hydroponic devices are able to control temperature growing environments. So we can raise farm products stably and save labors. In our research, we made hydroponic devices to carry out circulation culture that can make our society more sustainable.

2. Methods and Results

【Methods】

(1) Choose materials: Frame (shelves of stainless steel, tanks of culture fluids, etc)

Cultivation tubs (plastic trays, LED lights, simple intake pumps, etc)

(2) Cultivation vegetables: Lettuce, leaf lettuce, Korean lettuce, bok choy (Chinese vegetable)

(3) Culture fluids: We used Hyponex liquid fertilizer which was diluted by 100 parts of water

(4) How to circulate: Circulate culture fluids every 15 minutes by using timers and pump

During the night (6 p.m.~6 a.m.), stop these devices

(5) LED light supplement: Observe growth differences among red, blue and green LED lights

【Failures and Ways to improve】

- Pump didn't work well because we used it continuously. So we alternated using the machine for 15 minutes and letting it rest for 15 minutes.
- In the summer, it was too hot to grow them. So we need to adjust the temperature by using air conditioners.
- Culture fluids overflowed from the cultivation tubs, so it is difficult to adjust the amount of water supplied. So we must make fine adjustments to the amount of supplied water by using valves.
- At first, we raised them with LED lights only. However, the plants grew prematurely due to insufficient lighting. We use LED lights and sun lights.

3. Conclusion

According to the result of our experiment, we raised four vegetables by using the three different LED lights, there were almost no differences by visual inspection. Next time, we will observe the difference of carbon dioxide consumption by photosynthesis in each experimental fields with CO₂ monitors. We also will check the change of vegetables growth by an appliance to measure chlorophyll and we will study the invisible difference of vegetables growth. For this hydroponics cultivation to be successful, we need to improve our devices and collect more research data. Moreover, we should continue to study the light environment to raise plants, and how to spread hydroponics cultivation.

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Eco-Glamping Project from the environmental capital

SGH 2810: Kumamoto Prefectural Minamata High School

Key words: eco-glamping, depopulation, fewer jobs, vacant house, the 3R's

2810

1. Introduction

There are some strong points about Minamata City: it was the first city in Japan to be designated “the Environmental Capital City” in 2011; this city was ranked within the top 50 of elderly people-friendly cities in Japan in 2016. On the contrary, the results of our survey of the students of Minamata High School say that this city has various kinds of problems: the depopulation of young people; few jobs; many vacant houses. We propose solutions to these problems through “the Eco-Glamping Project.”

2. Methods and Results

First, we researched the problems of Minamata City by checking some documents on the Internet and interviewing municipal officers. Second, we conducted a questionnaire with the 2nd graders asking about Minamata City's strengths and weaknesses. Additionally, we thought about the strengths of Minamata High School so as to think of better ideas.

Using our research, we propose the following project as a solution to Minamata City's problems: to make good use of deserted houses as eco-glamping facilities, while considering the 3R's, and looking for residents for these houses.

3. Conclusion

The expected effects of this project are the following: to secure the safety of the community; to expand the lifetime of vacant houses; economic development of the community; job creation; increase in population. On the other hand, we have some hurdles such as clarifying standards of houses' security, and working in cooperation with Minamata City's administration, local companies, and local residents.

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Awards

Nuchigusui “Shi-kuwa-sa”

Using Okinawan supreme fruit “Shi-kuwa-sa” for eradication obesity

2811: Nahakokusai Senior High School

2811

Key words Shi-kuwa-sa, Nobiletin, Dissolving obesity

1. Introduction

Obesity is one of the huge problems Okinawa has. We found a way to solve this problem by using “Shi-kuwa-sa”. “Shi-kuwa-sa” is one of the many citrus fruits found in Okinawa, which contains high amounts of Nobiletin. Nobiletin has a lot of positive effects for our health such as suppressing the escalation of blood of sugar, it promotes for burning and prevents high blood pressure. We created some Shi-kuwa-sa recipes to make it easier for people to intake Nobiletin in their daily diet.

2. Method&result

We carried out the following to improve and prevent Okinawan obesity. First, we came up with recipes using “Shi-Kuwa-sa” juice, in which we pressed an entire fruit. Since the skin contains 98% of all Nobiletin in the “Shi-Kuwa-sa” fruit, large amount of Nobiletin remain in our juice. Next, we uploaded recipes on the site “Cookpad.com”. With over 1,000 page views, it shows that our “Shi-Kuwa-sa” recipes are popular. We are thinking of effective ways to inform Okinawan about the health benefits of “Shi-Kuwa-sa”, via our recipes. We are also planning to use this method and to improve the serious obesity issue in the Pacific nations. Due to the geographical factors of those nations, which are similar to that of Okinawa.

3. Conclusion

We were able to come up with healthy recipes which contains “Shi-kuwa-sa” juice. Looking at the high number of views on our recipe webpage, we succeeded in making people interested in “Shi-kuwa-sa”. However, we would like people to consume “Shi-kuwa-sa” juice in their daily life. Therefore, we need to think of more effective ways to succeed and we hope to resolve the obesity problem in Okinawa. In addition, we can apply this method to help resolve the obesity in Pacific nations which also have a serious obesity problem. However, it is difficult for us, high school students, to export “Shi-kuwa-sa” to those countries because of complicated procedures in a high cost. We came up with the idea of planting “Shi-kuwa-sa” seedlings as the best way to have people in pacific nations use “Shi-kuwa-sa”. We are cooperating with JICA to think of ways to put this plan into practice.

Our action to prevent child poverty

Morioka Chuo High School

Key words: Child poverty, Education gap, sustainability, global scale, suggestion for the future

A04

1. Introduction

Morioka Chuo High School has 24 sister schools all over the world. We discuss the SDG's with oversea students at annual 21st CHUO International Education Forum. This year, our group discussed "Child poverty" and we visited a food bank to deepen our understanding. We have been collecting school uniforms to help children in poor conditions.

2. Methods and Results

Each country's situation

Argentina: 48% of children are poor. 20% of the children live in extreme poverty. Poverty has been defined as a household's inability to financially cover a basic basket of goods and services, and extreme or absolute poverty is defined as a household's inability to meet the financial cost of a basic food basket. 3.5 million children live in poverty (due to both insufficient income and deprivations) and the total number of children living in no monetary poverty is 6.3, which leaves 2.8 million unaccounted by official figures.

Australia: More than 22,000 children in South Australia live below the poverty line. Poverty rates are increased in rural areas due to less employment and education South Australian poverty rate of approximately 12.6%.

Singapore: 10~14% of Singaporeans struggle to afford basic necessities. 43.45% increase in families relying on government financial assistance from 2012 to 2015.

Taiwan: In 2015, the gap between the rich and the poor in Taiwan was the second highest in history. Children under 12 in poverty account for 18.34%, nearly 120,000 poor children in Taiwan. About 71.5% of poverty children suffer from unbalanced education due to the lack of education fees.

Vietnam: 1. There are 5,6 million poor children. 2. Current problems (26,6% of child poverty focus on mountainous areas. 11% children don't receive education. 170,000 children are abandoned and live in poor conditions.) 3. Culprits (Poor education, Low income, Food and water shortage, Poor living condition)

Okinawa: Okinawa's salary rate is the lowest in Japan. 1 in 3 children suffer from poverty. The Japanese government doesn't do anything effective. The Okinawan prefectural office provides information, and has support centers that work with schools, making a foundation that provides the needed support.

Iwate: Child poverty rate of Iwate prefecture was on increase from 1992 to 2012. It was 5.4% in 1992, it became 13.8% in 2012. The university entrance rate of Iwate prefecture is bottom 3 in all prefectures in Japan. If people don't go to high school, university or college, they will have no choice but to live under low-income and unstable employment when they become adults.

Food bank

Common Ideas

1. More awareness needed not just in Japan.
2. We feel good when we help others.
3. We have to prevent poverty cycle by the education.



3. Conclusion

Global Solutions.

1. Set up food banks or donation drives in every country to solve the problem of insufficient food and resources for children born into poverty.

2. Make academic guidance programs for students (where students teach other under-privileged children) and to ensure sustainability for the programs, we could initiate with school programs. Also, we could make a skills program with NGO for people who are willing to work.

3. Raise awareness by talking and posting about these problems. For example, crowd funding.

→ We will keep collecting school uniforms.

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Our First Steps

~To realize a more harmonious society in Japan~

A17

A17

Otsuma Nakano Junior and Senior High School

Key Words: Immigrants, Harmonious society

1. Introduction

According to the Japan Times, in 2018 there were approximately 2.73 million foreign people residing in Japan. They stated, “The number of foreign residents in postwar Japan has continued to increase almost consistently. Although the number of foreign residents temporarily dropped after the global economic crisis in 2008 and the Great East Japan Earthquake in 2011, it has again begun to grow significantly since 2013. Today, foreign residents account for about 2 percent of Japan’s population.” Having acquainted ourselves with this fact, we thought it was crucial for us to imagine the future society we would like to live in. The consensus was to build a society of harmony. To realize this society, we decided to conduct research, asking the immigrants themselves about the issues they were facing. The details were unexpected, and we were overwhelmed. In this presentation, we will indicate “immigrants” as a person and their family who came to Japan to pursue work. In accordance to this term, we would like to present possible solutions focusing primarily on issues affecting children.

2. Method and Results

The following are our hypothesis of what challenges the children will face such as but not limited to;

- a) Bullying in schools,
- b) Difficulty fitting in the friendship group,
- c) Uncomfortable accepting different culture,
- d) Learning multiple languages,
- e) Being rejected from entering schools and other facilities,
- f) Not being able to get proper medical care,

We handed out a survey to foreign teachers to start with. We found out that most teachers felt their children were suffering, and all the teachers had difficulties raising their children. The difficulties were mainly concerning their appearance and how they were treated because of it. They were being spoken to differently, and had difficulty finding a residence. In conclusion, it was caused by people’s ignorance and their prejudice. Additionally we will conduct another survey, this time focusing on labor workers and their child from a non-English speaking country.

3. Conclusion

Through our primary research, we deeply developed the knowledge of the immigrants. And we recovered several more issues than we expected. To work out this solution, we believe that it is crucial to pass on the awareness of our issue to the wider public.

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Examining the Future of Model United Nations for Junior High School Students and Education in Japan

A26: Gifu Prefectural Seki High School

A26

Key words: education, gap, countryside

1. Introduction

“Model United Nations (hereinafter called “MUN”) for high school students” is a national conference where high school students discuss global issues. We can improve our ability to analyze problems, think logically, and deepen mutual understanding through this conference. These days, although the number of high school students who participate in this conference has been increasing; delegates from the countryside are still few. Many students in our prefecture are unaware of Model United Nations. Moreover, the Tokyo metropolitan area has MUN practice conferences about once a month, while Gifu only has once or twice a year. I believe that this situation causes a regional educational disparity. To improve this situation, our school held the Model United Nations for public junior high school students for the first time in Japan.

2. Methods and Results

(1) Organize the conference

To hold the conference, we developed a plan with Mr. Nakagawa, who was a member of the MUN club at Keio University.

(2) Hold the conference

We held the Model United Nations on July 21st, 2019. Junior high school students acted as ambassadors in pairs. The chairs used “simple procedure” so everyone could understand what the MUN is. The language used by each chair at the conference was English, while ambassadors used Japanese to discuss the issues.

(3) Take a questionnaire

Students who joined the MUN answered a questionnaire.

(4) Results

Every junior high school student seemed to enjoy the MUN conference. Although some participants did not know about the MUN and had not even heard the word “the Model United Nations” before, most of them were satisfied with this conference. They also expressed their desire to try it again. Similarly, they realized that they could improve their communication skills, critical thinking and global awareness through this conference.

3. Conclusion

As evidenced by its high literacy rate, education in Japan is accessible but I believe that opportunities and the quality of education across the nation are not always equal. The lack of information or chances to experience activities which can improve students’ skills causes a regional gap. The aim of the MUN should be to give more students opportunities to think logically and globally. I hope that the MUN, like the one we held for junior high school students, will serve as a catalyst in providing quality education to many people in the countryside, and that this will lead to the improvement of education in Japan.

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Higashiyama ~a friendly town~

A37 Hiyoshigaoka High School

A37

Key words

harmony, Diversity & Inclusion, tourist, local society, dissatisfied, activation, enlightening activities

Introduction

In the Period of Integrated Study class, we re-examined our town, from the viewpoint of a wheelchair user. We realized that our society is not “barrier-free,” in the sense of being a “user-friendly” place to live. In order to change our society to be a “user-friendly” environment that accepts diversity, in other words admits differences, we thought about who around us might be feeling most inconvenienced. From this, we decided to focus on the relationship between tourists and residents in Higashiyama Ward, Kyoto.

Methods & Results

First, we interviewed 13 people to find out what problems and complaints there are living in Higashiyama Ward, where the number of tourists keep increasing annually. Trash on the streets, very loud voices in public, and overcrowded buses were the three main concerns.

Then, we asked 47 tourists what could be done to make our town a comfortable place for visitors. They are happy with the sightseeing spots in Higashiyama Ward, but point out the lack of English signs and people who can speak English.

Conclusion

If both tourists and residents could understand each other’s position and could come to understand one another, Higashiyama Ward would become a much more attractive and lively place for all. To tackle the task for improvement in tourist behavior and local hospitality, we are holding events at our English Village to deepen understanding. We also plan to work with the ward office, police station and community to make posters for awareness.

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MY book project

An idea to address the educational problems in the Philippines

A 39: Seikyo Gakuen High School

A39

Key words: the Philippines, poverty, education, book

1. Introduction

We visited a slum in Cebu in the Philippines in 2018. There, we found that many children couldn't receive enough education because of poverty. From this experience, we started researching the current educational situation in the Philippines. Due to the K-12 system, which is the compulsory education system adopted in 2011, the educational standards have improved. However, the shortage of teachers, classrooms, and books are still serious problems in public schools. We came up with an idea of collecting used English textbooks and sending them to the Philippines. We named this project "MY book project".

2. Methods and Results

We have made a sustainable system for this project that has three parts: books, money and people.

Books: We are sending English textbooks that were used by Japanese students in their previous year of study. We

talked with someone from the Philippines who came to Japan about this project and we received a comment that it is good that we are sending color textbooks because they don't have regular access to such books.

Money: We are using some of our school festival's profit to send books to the Philippines.

People: We are being helped by a Japanese woman who lives in the Philippines. She receives the English textbooks and distributes them to children based on their level. These children are in kindergartens, public elementary, junior, and senior high schools, and also slums. She also reports on how the children use the books.

This summer, some students from our school went to a slum area in Cebu. We asked them to take some textbooks and hand them to children living there. According to their report, the children were delighted with the books, and they wanted more. Following this, we sent more books to the Philippines at the beginning of October. After a month, we received a report that our books had arrived in the Philippines. Now they are being distributed to children, and we are waiting for a report on their use.

3. Conclusion

We saw some positive effects from distributing books to children, however there will be some challenges in this project in the future. One is whether children in the Philippines truly need books. Another is whether it is possible to rely on a single person to distribute books. We also need to continue researching how the books are used and whether our project can actually play a part in addressing the educational problem in the Philippines. In addition, for this project to continue after current members graduate, a clear, concrete system needs to be put in place.

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Food Loss Reduction Squadron BIGON

~How to decrease food loss from improving "Loss-Food"~

A44 Hokusetsu Sanda Senior High School

A44

Key words : food loss, loss-food, improving the food loss problem method, reduction

Introduction

There are about 6 million and 430 thousand tons of food loss every year in Japan. This is equivalent to a bowl of rice being thrown away every day. Yet, the poverty rate for Japanese children is 13.9%. I feel these facts contradict each other. Both there are many causes of food loss, and we have many ways to reduce it, but the rate of reduction is very slow. I found one reason for this is the amount of food that is sold, only to be abandoned when it is still edible. This is called "Loss-Food", when food that can still be eaten is thrown away because it passes the sales deadline. I wanted to research how to reduce this.

Methods and Results

In my research, I made three hypotheses as to why food loss isn't decreasing. Firstly, we don't have a deep enough understanding about the current situation of food loss. Secondly, we don't understand the difference between the "use by" and "best before" date, and thirdly, there is resistance to eating "Loss-Food". In order to test my three hypotheses, I created a questionnaire, conducted an experiment with "Loss-Food" and free provision. While I gathered a group of volunteers for my "Loss-Food" experiment. In conclusion, eating "Loss-Food" is due to attitudes of the mind. Finally, I aimed to spread awareness about "Loss-Food" for the people of Sanda at "MOTTAINAI-FOOD CENTER" where I showed my research by a poster.

Conclusion

In conclusion, I want to show how to decrease food loss at home and in big companies; by changing the law and increasing our education.

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The First Step to Changing Japan!

Increasing Female Membership of the Japanese Diet

A50 Notre Dame Seishin Gakuen Seishin Girl's High School

A50

Key words: Female members of the Japanese Diet 17 years old Gender

1. Introduction

When we thought about what kind of adults we wanted to be, we felt we wished to become adults who can use our full abilities to improving society. However, many areas of Japanese society are male-dominated, and lack female voices. Therefore, we want to create a society that values women as independent people who are valued in all parts of society. One way to do this is to increase the number of women parliamentarians. This is because the Diet is the number one decision-making body in society. As a first step to that end, we would like to know from the perspective of politics and awareness why women parliamentarians are not increasing.

2. Methods and Results

We made two hypotheses. The first is "Wouldn't it be difficult for women to become Diet members?" and the second is "People have the consciousness that women should not become member of the Diet, and it is preventing women from becoming member of the Diet." We investigated through interviewing 17 year-old students attending co-ed high schools. We analyzed the narratives of six men and six women.

3. Conclusion

We came to two conclusions; firstly, there are not enough effective measures for women to become member of the diet in Japan. Secondly, the awareness of gender role division is not fundamentally lost.

The conclusions of this study were not completed such as the small number of people surveyed, and we could not reach a definitive conclusion that the number of women membership did not increase. From now on, we are going to conduct an interview survey for American students with the same questions as in Japan at the age of 17.

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Awards

What Role Do Supermarkets Play in Consumers' Ethical Consumption?

Case study of Supermarket "MARUOKA" and "FUKUSHIMAYA"

Number: W201901-1 Senior high school at Sakado, university of Tsukuba

Key words: ethical consumption, supermarket, sustainability

W2019
01-1

1. Introduction

Ethical consumption is to buy products in consideration for a person, society, and environment. It contributes to solving global issues such as poverty, inequality, or destruction of nature. It is important that many people participate this ethical consumption little by little. However, ethical consumption is hardly recognized today in Japan. Then, how can we improve people's awareness of ethical consumption?

This is a case study of two unique supermarkets in Japan which sell sustainable products and may contribute to ethical consumption. In this research, it is found out whether these supermarkets promote ethical consumption or not, and the reasons for the results.

2. Methods and Results

The investigation consists of the interview with the managers and employees, also fieldwork in the over-the-counter-sales (OTC) was conducted.

From the interview to the managers, it is found that they aim to provide delicious and safe food products so that they choose sustainable products. In short, ethical consumption was unintentionally encouraged.

From the interview to the employees, it is found that their shopping habit was dramatically changed by working there. This is because they do a direct transaction with producers face to face.

At last, OTC system is that the actual producers come to the supermarkets and stand in the store to sell their products to consumers directly. It played an important role that highly motivated producers and consumers expand their network with each other.

3. Conclusion

These two supermarkets promote consumers' ethical consumption in three ways. The first one is to provide "delicious" and "safe" products. The second one is to change the employees' shopping habits by doing a direct transaction. The last one is to form a community including producers, employees, and consumers.

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Awards

Nationalism vs Globalism

New World Order: Changing Nature of International Relations

Number: Senior High School at Otsuka, University of Tsukuba

Key words: Nationalism, Globalism, Economic Anxiety,

W2019
01-2

1. Introduction

In today's world, globalism has been emerging rapidly. We have been benefiting from greater connections between people, things and services and have created harmony among countries. However, as illustrated in the example of president Trump and Brexit, nationalism has started to show its appearance. What are the key factors to this phenomenon?

Globalization in the economic standpoint can bring a nation both benefit and harm. Economic globalization, in other words lowering trade barriers, essentially creates a division of labor in a worldwide scale where a nation will only focus on its most competitive industry. This often creates a tendency where a dominant industry receiving even more benefit from trading, and the minor industries being harmed because of the influx of competition from outside the nation. Therefore, economic globalization can create disparity within a nation, leading to the rise of economic anxiety.

2. Methods and Results

The key factor that leads to the spread of nationalism in a country is economic anxiety.

To prevent the spread of nationalism, there are two paths that can be taken: to alleviate the economic anxiety itself, or to prevent the economic anxiety from giving rise to nationalism.

Alleviating economic anxiety, in other words eradicating poverty, does not have a simple solution for all nations to follow. However, there can be new measures taken in order to cut the connection between economic anxiety and nationalism.

The solution we propose is providing education so that everybody can adapt to the change that globalization has posed. This requires educational system that focuses on skills that can be readily used in business, that answers the specific needs of the students.

3. Conclusion

To overcome the negative loop of globalization creating a wave of nationalism, there needs to be a method taken to cut this cycle. One way to break this cycle is to cut the connection between economic anxiety leading to nationalism, which can be done by educating skill to ensure that globalization is a gain to everyone.

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Awards

Sentiments of Studying Abroad Foreigners and Perspective from The Domestic People

The advantages and disadvantages of studying abroad

Number: W201901-3 KASETSART UNIVERSITY LABORATORY SCHOOL

Key words: Studying Abroad, Foreigner, Opinions

W2019
01-3

1. Introduction

Studying abroad could be an admirable experience for most students to have such an interesting experience in a new environment, new people and new perspective. Many people have a bright expectation about the exchange program. As well as the domestic people, who would welcome with pleasure. What they have experienced, what they have felt or their stories are worth spreading.

In the other hand, the suspension of knowing if there are some another opinion about exchanging program is also absorbing. Along with joy, for some people, possibly, might have some obstruction. Simultaneously, a genuine impressions from the domestic people is never been heard.

2. Methods and Results

The method to acknowledge of opinions from both side, is to interview and asking both people who went or is going to studying abroad, and the domestic people who is visited. Then collect them in data, based on the interview, and self's experiences.

Most answers are positive, from both the studying abroad people and the domestic people. An exchange program is a good opportunity to interchange cultures and bond international relations for both countries. For the domestic people, the answers mostly are positive, showing that they surely look forward and will be excited to welcome the foreigners. In the side of the people who go to studying abroad, there are answers both positive and negative. The negative answers are chiefly about being homesick, anxiety from studying hard and fitting in new society, as well as the unfamiliar languages.

3. Conclusion

Most people had positive viewpoints and opinions about studying abroad, that it is a good chance to experience new thing with new people in new places and learn something newer. For the domestic people who were visited, mostly revealed that they were impartial to the exchange students and even would like to try to be friend. Besides, the fact that they had a different culture made it interesting and fun to learn about each other. Same as the foreigners in the exchange program. According to them, studying abroad is seemed to be very pleasing and challenging event in one's life.

Even so, for the exchange students, some of them might had some negative feelings during the program, caused by being far away from their families and had to qualify themselves in a different environment and different social. Plus, the unfamiliar language, in case they didn't skilled enough to speak fluently, or to use in advance. So that's why they had to study harder and more stress. Those are the disadvantages of studying abroad.

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<https://www.quora.com/What-are-the-advantages-and-disadvantages-of-being-an-exchange-student>

Awards

Cultivation with Artificial Salmon Roe

-Aiming at less water consumption-

W201902-1: Tokyo Metropolitan Minamitama Secondary Education School

Key words: artificial salmon roe, cultivation, water retention, broccoli sprout, water for agriculture

W2019
02-1

1. Introduction

In most of agricultural fields, plants are sown in soil. In that way, however, plants cannot be cultivated in some regions where farmers cannot supply water due to drought or climate change, which results in people there suffering from food shortage. Besides soil-based cultivation, hydroponics, cultivating plants only with water containing nutrients, has been focused on recently. However, hydroponics requires a lot of water and it is hard to cultivate root vegetables with the method. Therefore, to overcome those problems in soil-based cultivation and hydroponics, I suggest using calcium alginate beads, termed artificial salmon roe (Ikura) in the study. One of the properties of the artificial Ikura is that it retains water. The water retention protects artificial Ikura from rotting quickly, which means that artificial Ikura may be suitable for cultivation of root vegetables. We are familiar with the artificial Ikura in that calcium alginate beads have been used as educational sweets, which indicates artificial Ikura can be safely applied to plant cultivation. Therefore, I compared three cultivation conditions (with soil, water, artificial Ikura) in terms of how much water they require, how long they last, and how fast plants grow on each condition.

2. Methods and Result

For culture medium, soil, water and artificial Ikura were used. Artificial Ikura was made from sodium alginate and calcium lactate. 20 seeds of broccoli sprouts were sown on each culture medium, and grew them for 7 days. In the first experiment, I supplied appropriate quantity of water to each medium in order to measure how much water each culture medium consumed and how long the stems and roots of broccoli sprouts grew. As a result, the water consumption of artificial Ikura medium was 22% as large as that of water medium but 188% as large as that of soil medium. As for the growth of the broccoli sprouts, the length of stems and roots cultured on artificial Ikura medium was equivalent to those of soil medium. In the second experiment, I grew broccoli sprouts on each medium for 7 days without supplying any water in order to observe how each culture medium rots and dries during cultivation. The results indicated that mold arose in water medium but not in artificial Ikura medium in the case where cultivation was conducted on warm days. In addition, the broccoli sprouts in artificial Ikura medium grew in a manner similar to those in soil medium.

3. Conclusion

1. It is possible to cultivate plants with artificial Ikura.
2. Cultivation with artificial Ikura can largely reduce water consumption compared with hydroponics (approximate 80% less)
3. The ability of artificial Ikura to retain water is as good as that of soil.

Therefore, I assume that artificial Ikura can help solve food shortage problems or gain greens in desert areas. Moreover, both artificial Ikura and soil consist of beads, so artificial Ikura may be able to be used for growing root vegetables. Thus, I am going to research whether it is possible to cultivate root vegetables by using artificial Ikura.

Tokyo Disney Resort with a totally blind girl

-Everyone respects each other's differences.

W201902-2: Tokyo Metropolitan Hakuo Junior and Senior High School

W2019
02-2

Key words : Tokyo Disney Resort, The visually impaired, A barrier free society

Introduction

It is well known that Tokyo Disney Resort is loved and often visited by many people. However, it is rare to see guests using additional services such as braille and audio guidance there. Also, it does not have any discounted tickets for guests with disabilities. Although humans get about 80% of all information through their eyes, there is little research which investigates the current situation of the services for people with disabilities, especially the visually impaired, in Tokyo Disney Resort. By focusing on the services and support for the visually impaired, this article examines measures for them to enjoy as much as possible, and to make our society better for everyone. .

Methods and Results

A preliminary survey was carried out on facilities and services for the visually impaired in Tokyo Disneyland on the Internet and the literature. This study investigates whether Tokyo Disneyland is well-equipped and provides sufficient services for the visually impaired. To achieve this goal, a field survey was conducted in Tokyo Disneyland with a totally blind girl. Through the field study, we found that facilities in Tokyo Disneyland are not designed adequately for the visually impaired and insufficient support by employees. These findings are unexpected. However, the results of this study revealed that the visually impaired felt unsatisfied when they visited Tokyo Disneyland and the facilities there had potential for improvement for future guests.

Conclusion

In order to make our society more comfortable not only for people with disabilities but also those without disabilities, we put forward a suggestion: more promotion of a barrier free society. Some ideas for improvement could be using universal designed fonts for display including restaurant menus, and creating new audio guidance which explains actions of objects and objects themselves in view. Past inventions have helped people with disabilities and have also made lives of people without disabilities more convenient. To cite a case, platform doors were actually installed in train stations to prevent people with disabilities from falling onto train tracks and they help others, as well. By continuing to try to understand each other and show our understanding, our society can be improved for everyone.

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To increase the Crop Yield in Nuba Area

~by improving the farming method of smallholder farmers~

W201902-3: Tokyo Metropolitan Hibiya High School

Key words : adoption for smallholder farmers, agriculture system, developing country, compost

W2019
02-3

Introduction

We discussed a way to increase the crop yield in developing countries without causing a drastic change to the lives of the local people. This time, we focused on Nuba, in Sudan, and made two proposals to make the current agricultural system more efficient. First is to adopt crop rotation of the staple foods. Now Nuba has a parasitic plant called *striga* which is one of the major obstacles to achieve a good harvest. However, the introduction of a crop rotation will reduce the damage caused by *striga*. Second is to improve the quality of their composts. These two methods will surely lead to an increase in crop yields.

Methods and Results

We completed our proposal through the following steps. In order to make our plan truly feasible in the region, we asked many people who are familiar with the agricultural system in Nuba. We made contact with these people totally on our own.

1. Decide the theme

We searched on the Internet and read books to get informed about food issues. We focused on the most fundamental part: food production. We chose Nuba Mountains as an example of a rural area in which smallholder farmers live.

2. Find problems in Nuba

To find problems to solve in Nuba, we went through academic articles and statistics like FAOSTAT. We also sent e-mails to Kobe University.

3. Make the draft plan

We consulted the following experts to confirm the feasibility of our plan: Mr. Kamoshida, Mr. Hashimoto, Mr. Imanaka and Mr. Tachibana, who have all volunteered in Nuba; officials at the Compost Center in Tokyo; Secretary Hisham of the Sudanese Embassy in Tokyo. We tried making high quality compost on our own at the farm of Mr. Kamoshida. Through these experiences, we confirmed that our plan is valid in terms of its necessity and cultural acceptability, and it can be achieved with the resources that already exist in the area.

4. Feedback form the Aspen Institute in New York

We proposed our idea at the Aspen Institute in New York in August and received feedback from experts on global food issues.

Conclusion

Nowadays, it is a trend to support developing countries through humanitarian projects. However, it is common to give priority to a project which is only effective in the short term, and the effect of which is easy to see. As a result, many projects target large scale farms, or cause a considerable change to the lifestyle of local farmers. We didn't want to do that; therefore, our plan has made the most of what was already available to the local community. We believe the farmers of Nuba would be able to achieve sustainable high crop yields by crop rotation and the improved compost.

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Sink or Swim

How Small & Middle Sized Enterprises Can Respond To Floods

W201903

Shibuya Junior & Senior High School

W2019
03

Keywords: BCP, Small & Middle Sized Enterprises, Floods

1. Introduction

With climate change accelerating, Japan and countries worldwide are receiving the impacts through the increase in flooding. Floods cause significant economic damage, and while large-scaled enterprises function a risk-management plan, there are many small/middle sized enterprises that lack one. Small/middle sized enterprises support our society in many ways— it is vital that their sustainability is insured. We proposed a unique risk-management plan (Business Continuity Plan; BCP) for these enterprises in order to create a sustainable environment for both the businesses and the society.

2. Methods and Results

Our research consists of mainly three sections:

- 1) Understand the reasons why many small/middle sized enterprises lack a BCP
- 2) Prove the necessity of a BCP
- 3) Compare the highly-assessed BCPs of multinational enterprises to filter out the basic necessary aspects.

We first viewed surveys taken by small/middle sized enterprises and found that the main barrier for these enterprises adopting a BCP is the lack of time and knowledge. Two case studies— comparing the physical and economic state of small/medium— showed that BCPs are in fact, necessary for the sustainability of these businesses.

3. Conclusion

The plan we have laid out for enterprises can be used by any company, no matter how small or large, and therefore presents itself as a reliable guideline for economizing flood damage costs. By encouraging corporations to create their own BCP's, we believe that disasters such as the one that struck Hiroshima can be dealt with in a more calculated and effective manner. Through the eyes of risk management professionals in Japan, such plans may help us tackle this difficult issue of flooding from a global and local perspective.

Awards

Global Responsibility Conference 2019

Environmental and Natural Disasters Field

First Place

Reduce Food Loss via Marked Down Food

Receive Information of “Otsutomehin” with Online Media

W201904:Kanazawa University Senior High School

Key words: Food loss, otsutomehin, supermarket, online media

W2019
04-1

1. Introduction

Food loss is a serious problem. It costs much to dispose food waste, and it pollutes the environment because of the CO₂ and the ashes. Japan produced 6.4 million tons of food waste in 2016; a half was from home, and the other was from business. In response to this, since 2017, many food-sharing services have been released in Japan, on some of which we can buy it cheaper surplus dishes of restaurants.

Then we focused on supermarkets. Food of supermarkets is marked down when it is almost expired, and such food is called “otsutomehin” in Japanese. Customers cannot predict outside the store what food is discounted now, hence we assume that it will be useful if they can get to know it whenever and wherever. Therefore we propose an online media that dispatches information of otstomehin so that everyone can check it with a smartphone at home.

2. Methods and Results

Clerks of a participating store are given a smartphone on which the dedicated application software is installed. They take a picture of a product when they put a sale sticker on it, then they post the picture and the number of its stock. They need not post the product name and the price because the information are already in the picture. A post includes further information automatically coming with it: the store name, the store icon, and the posting time.

For users, the user interface resembles that of Twitter: the latest post appears on the top of the screen, and earlier ones flow to the bottom. Hence users can receive the current status of otsutomehins at a glance. Following stores, users can also see posts only from specific stores. Users cannot pay for the food or just reserve it on this media not to cause double-books. This leads users to the store so that some of them will buy other food than what they want as well.

3. Conclusion

This online media focuses on the burden of clerks. The additional work is only to take pictures and to post it with its number. Clerks do not have irregular payment or delivery that other food-sharing services assign, hence being a member store seldom hinders business of a supermarket. It will be useful to search food that a post includes the product name and the price as text data; nevertheless it is better to use optical character recognition not to increase workload of clerks.

Although it is technically difficult to inform users in real time that the food is sold out for every post, this media makes it unnecessary because posts flow down and disappear from the screen. Nevertheless, some users need it, and it seems to be effective to use the point of sale system of cash register. However, four supermarket companies claimed by email that it was not supposed to send product data out of the company. Therefore we still have to think about the real-time processing.

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注目のフードシェアリングサービスとは？飲食店のフードロス(食料廃棄)問題を解決するフードシェアリングの未来を考える。

<https://yoshikazu-komatsu.com/food-sharing/>

How does food loss influence the environment and our society?

W201904: Takaoka Senior High School

Key words: food loss, food waste, convenience store

W2019
04-2

1. Introduction

The problem of Food Loss is getting serious these days. In Japan, one person produces 51 kg of food loss in a year, which is almost the same amount as the annual rice consumption per person. Food loss also affects natural resources on the earth such as fuel and water since a lot of energy is used in making food. In other words, we waste our limited resources as well as food. In order to make our society sustainable, we should know how much we waste food every day and think about what we can do to reduce the loss.

2. Method and Results

First, we researched the present situation of food loss on newspapers and the Internet. The annual amount of food loss is about 6.46 million tons. We also found that there has been a “one-third rule” as a business custom in Japan. This rule states that when a food product reaches the last third of its consumable period, it must be removed from stores. That makes the loss bigger.

Second, we carried out a questionnaire to the students in our high school. We found that about 80% of them seemed to try something to reduce the food loss. For example, some chose almost expired products, others avoided buying too much food. However, there are still about 20% of students who don't know what to do towards reducing food loss.

Third, we had an interview with a manager of a convenience store. Since most of the food products at a convenience store had short expiration dates, there are a lot of unsold food products every day. As supermarkets do, convenience stores also sell at a marked-down price right before the expiration dates. The problem is that the stores can't make a profit if they give much marked-down. Consumers have an expectation that they can choose one from many choices.

3. Conclusion

As a consumer, we should know how much we produce food loss every day. In addition, we consumers should change our expectation on convenience stores that we'd like to choose one from many choices. We have to reduce the amount of products itself first. For companies, we'd like them to improve the “one-third rule” and introduce the reservation system for seasonal events such as Christmas. And we hope that they would develop food products to extend the expiration dates longer. For the government, we suggest that they should enact a law to improve the “one-third rule.” Also, they should support the “Food Bank system,” so that we can reduce the amount of food loss.

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What can local railway do for the community in the future?

Suggestion to Echizen railway

W201904:Koshi High School

Key words: Local railway, social infrastructure, regional revitalization, Hokuriku, Echizen railway

W2019
04-3

1. Introduction

Fukui, our hometown has a local train line called “Echizen railway”. From the background of its establishment, it is defined as a community –based railway service, and in Japan, it is one of the very few community-based railway companies which have a surplus profit. Therefore, using Echizen railway, we suggest an innovative idea named “Community Train”, which can be used as a mobile sales store and event space. In addition, we present the prospects of the new roles of railway lines in local societies

2. Methods and Results

At first, we chose a sightseeing train as our main research topic but after interviewing Ms. Mitera, a professor at the Fukui University of Technology, we noticed that a sightseeing train doesn’t fit the needs of the Echizen Railway. According to Ms. Mitera’s study(1), local residents believe that the biggest value of the Echizen Railway is its effect on the community’s vigor.

After that, we started to research a new idea named “Community Train”. It is a train which has the ability to attract people who don’t have a reason to use a conventional train. We suggest two roles which this train can have. First, it can sell specialty products of Fukui. We found the interesting effort carrying out on the Nagano railway, which is a local railway. They sell some products like vegetables or drinks in stations. Surprisingly, these are cheaper than local supermarkets because Nagano railway’s station agent buys vegetables whose sizes or shapes are irregular and sells them. Of course the taste is not affected. It can save food, reduce garbage and increase railway sales. So we think Echizen railway should sell products like those on this train. Second, it can be used as an event space. We focus on the fact that a lot of railway companies hold event trains. For example, sometimes “Oden train” is held in Fukui railway. We think we can hold event trains on a bigger scale and higher frequency by using this train.

3. Conclusion

Railway lines including Echizen railway, have a great influence on society. So, we think “Community Train” has the possibility to gather people and be a more convenient railway for the community, which promote regional revitalization.

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Title Collect it, decorate with it
Sub title Turning ocean plastics into something people can enjoy

W201905: Shizuoka Prefectural Mishima Kita Senior High School

Key words: Ocean plastic pollutions, micro plastics, Venturi effect, art

W2019
05-1

1. Introduction

Recently, ocean plastic pollution has become a serious problem around the world because people throw plastics into oceans and lots of marine creatures suffer from accidentally ingesting plastic products. Moreover, ocean plastics turn into micro plastics due to the exposure of waves and ultraviolet rays. It is no wonder that people are also at risk of consuming them without realizing. However, in our daily lives, we seldom see ocean plastics directly and do not take the issue seriously. As such, I collected ocean plastics with a hand-made device and attempted to introduce a possible way to make people aware of the existence of ocean plastics: art. By doing so, we can approach SDGs No.12 and 14.

2. Methods and Results

(1) Collecting ocean plastics in the seawater

At some coasts of the eastern area of Shizuoka prefecture, I found lots of micro plastics in the seawater and on the beach. However, I found it impossible to remove them with just manpower. So, I decided to a unique piece of equipment. I focused on the Venturi effect ---a phenomena widely used in protein skimmers. Protein skimmers can remove unnecessary objects from seawater by producing micro bubbles. This is what is meant by the Venturi effect. Utilizing the Venturi effect, I made a prototype device made of vinyl chloride and named it “Kibou No.1”. The device was used to sample microplastics in Suruga Bay. The micro bubbles produced in the device lifted ocean plastics up and they were collected into the storage chamber.

(2) Analyzing where to collect more ocean plastics

Following advice from Dr. Sakamoto at Tokai University Marine Science, I went to beaches where more ocean plastics can be found. The geographical shape of the shores influences the density of ocean plastics on the beach. Knowing the gathering mechanism of ocean plastics will make the collection of ocean plastics more effective.

(3) Making the collected ocean plastics into art motifs

Using my microplastic samples, I made a piece of artwork with a technique similar to sand painting. My artwork, “Whale tears”, can be touched physically by lots of people. If people know that they can also produce artwork with micro plastics, they will be willing to collect them on the beach.

3. Conclusion

Ocean plastic pollution is really a big problem. But it is difficult to raise awareness of this problem. If people find it interesting, they will be inspired to also collect ocean plastics to make their original artworks. Thus, the environment will be kept cleaner. Furthermore, improving my “Kibou” prototype and making it more accessible to others will also ameliorate the issue.

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Awards none

Our Research on Gender Bias That Is Being Created in Japanese Society

W201905

Shizuoka High School

Keywords: education, gender equality, human rights

W2019
05-2

Introduction

Japan is an industrialized and highly-modernized country. But, surprisingly, Japan ranks 110th out of 149 countries in terms of gender equality, ranking the lowest out of all developed countries. In particular, the greatest gender gap was found in the categories of politics and economics.

Each of us visited foreign countries this summer and saw the differences in gender equality between Japan and other countries. From our experiences, we noticed that Japan has fallen behind in gender equality. It made us wonder, “What are the causes of this problem?” One of our members participated in a program called “Japan Future Leaders School”. Many female students took part in it. She asked herself, “Why is there still gender inequality when so many girls want to be leaders?”

Therefore, we would like to know the reasons for the gender inequality in Japan. For this reason, we carried out a survey. We hope that a society where we are judged not by gender but by our potentials will become a reality.

Methods and Results

According to the preceding study, there are three causes that lead to gender inequality from childhood. One is the influence of the media on children. The second cause is the influence of their parent’s attitudes toward gender equality. Third is the influence of our generation on ourselves. All those affect how each of us think about the gender roles.

We carried out a survey on “gender equality” on four random classes at our high school. The purpose was to compare the preceding study with the data from our survey. Present high school students, those of us who have grown up during a global trend of increasing gender equality will play vital roles in creating and maintaining gender equality for future generations. In the survey, we asked seven questions. The results were as follows:

- ▶ As many as 40% of female students have experienced their parents asking them to do housework. The rate for female students is 10% higher than that for male students.
- ▶ Most female students used to like “playing house” during childhood.
- ▶ The rate of male students with a positive opinion of current gender roles is 10% higher than that of female students.
- ▶ Many male students do not have a well-formed opinion about the gender roles in their future families.

Conclusion

The root of this gender inequality lies in an on-going, traditional way of thinking about gender roles in Japan. In essence, men are expected to power economic activity, which deprives women of the chance to use their talents and skills. The survey shows that women are still asked to do more housework than men. This has a big impact on how we think about gender roles.

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What Is Quality Education? -You Have Not Experienced True Happiness Yet-

W201905: Shizuoka municipal high school

Key words: happiness, education, word, strength, positive

W2019
05-3

1. Introduction

It is reported that the influence of education on people's happiness is limited in Taiwan, countries of Central and South America, and even some advanced countries. What is the quality education which we seek? It is said that students do not grow up to be self-assured under the education system of Japan at present, because teachers tend to pay more attention to students' weaknesses. We thought this is the reason we cannot see the influences of education on the feeling of happiness here. An education which does not contribute to happiness cannot be quality education. The purpose of this study is to find out what "quality education" is by examining the Japanese language, interviewing teachers, and holding a workshop.

2. Methods and Results

Our first approach was to examine the words in a Japanese dictionary because we think that the words which are available to express emotions affect the emotions experienced. Therefore, we wanted to check the types of words that can be used to express feelings in the Japanese language. We decided to call the words which express feelings "feeling words." First, we picked out "feeling words" from all the 80,000 words in Shinmeikai Japanese Dictionary. Then, we classified all the feeling words into positive and negative categories. As a result, we found 2,019 "feeling words," including 1,107 negative words, 659 positives, and 253 neutral. The ratio of negative words and positive words was about 2:1. The next thing we needed to identify was the usage frequency of the positive and negative words in the field of education. We interviewed 15 teachers at our school and asked them 8 questions about their strengths and weaknesses, and their tendencies to use positive reinforcement or to use negative one as their teaching methods. Most teachers answered they scold more often than they praise; thus using negative reinforcement. Finally, we conducted a workshop to investigate whether we can lead a happier life if we are aware of our strengths. In this workshop, we developed 2 programs in which participants could notice their strengths. Participants worked in pairs and praised each other about their strengths. The purpose of doing this was to let the participants become aware of their subconscious strengths. At the end of the workshop, we asked all participants if they felt differently about themselves than before the workshop. The percentage of participants who felt happier than before by noticing their strengths in our workshops was about 97% while 3% remained the same. These findings suggest that there are so many negative factors such as the sheer number of words that exist, usage frequency, and word choices. In a previous study, we learned that one of the reasons for these facts is the nature of human beings based on negative bias, emotional inertia, and psychological projection. Our lives are inundated with these factors, which make us less aware of our strengths. However, the actions based on the awareness of strengths can combat these and contribute to the feeling of happiness.

3. Conclusion

We need to make an effort to pay more attention to our positive sides to experience true happiness. The same is true in the field of education. If teachers begin to use positive reinforcement to help students recognize their strengths instead of focusing on their weaknesses, it will allow students to develop as more self-assured, happier individuals. Therefore, it can be concluded that an education where students and teachers can focus on mutual positive sides enables us to experience true happiness, and such experience should be called "quality education."

Although we are just high school students who receive school educations, we believe this study will be useful in the future. Our study can be applied to our future educators and can be our first step to make people around us happier.

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Supporting Laos by Advertising Lao Coffee 'build a bridge between Japan and Laos'

W2019
06-1

W201906: Ritsumeikan Uji Junior and Senior High School

Key words: Laos, Business, SDGs, Coffee, Trade

1. Introduction

Our project was created in 2014 by IM(Immersion) course students at Ritsumeikan Uji High School with the purpose of stabilizing Lao people's lives and providing proper education to the children in Laos, which related to the SDGs of No.1,4,8,10,17. Ever since, our seniors and we have provided yearly upgrades and created new approaches to overcome complex issues. According to the Borgen Project, 90% of people in Laos are still forced to live off of \$1.12 a day and Laos is considered to be one of the poorest countries in Southeast Asia. This is why our school chose to specifically work with Laos.

In order to achieve the goal of improving the standard of living in Laos, we have focused on Lao coffee which is a major industry of the country. Our group members have been selling Lao coffee beans and hope to open up a market in Japan, so Lao coffee can be known and favored by more people. To achieve this goal, we attempt to secure an import route to connect Laos and Japan. This will enable us to rise reputation of Lao coffee and help farmers to have a higher income. Increasing sales will allow everyone freedom to explore more ways to better business not only in Laos, but in Japan. This leads to an increase in the standard of living, and children can receive better education in Laos.

2. Methods and results

Visiting a country is crucial when doing research in areas that are unfamiliar. Around 30 students visit Laos each year. They visit Laotian coffee farms, negotiate with the farmers and bring 150kg of coffee beans back to Japan every year. The imported coffee beans get roasted, sold either at the coffee shop in Uji, school festivals and local events. As Laotian coffee earns fame little by little within the local area, and it has grown popular enough to grab repeat customers in the coffee shop. In this year, we have sold more than 350 cups of coffee at three festivals throughout Uji City, Kyoto, and we gained a profit of 150,000 JPY. Our group has accumulated accurate data of people's response to Lao coffee and improved strategies of getting customers throughout the number of events we have held for the past 5 years. To expand the project, the group is in discussion with Alter Trade Japan, an import company, to secure the import route to purchase 200kg starting in 2020.

3. Conclusion

The project has been successful and we have created a lot of new Laotian coffee fans in Uji City. This information has allowed the group to discuss the next steps to expand the field of sales and make Laotian coffee more well-known in Japan. The group has established its own business and has found a new way of importing larger amounts of coffee from Laos every year. Moving forward, we aim to attract new clients who can sell imported Laotian coffee beans, in or outside of Uji. This step will help us expand our business, create opportunity for the farmers in Laos to get more profit and provide the financial resources necessary for students to expand educational opportunities for a more sustainable future.

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What Have We Done for Making A Sustainable Society? - Action Based Approach to Eliminating Plastics-

W201906 Ritsumeikan High School

W2019
06-2

Key words: plastic waste, microplastics, Bali, Sweden, Rits Super Global Forum 2019, eco bags

1. Introduction

Many ecosystems have been destroyed at great expense, because we are still pursuing convenience. We became aware of the facts about plastics when we did study trips to Bali and Sweden to learn about the environment.

The fast food industry has been built upon the convenience of plastic. Plastic's reputation fell further in the 1970s and 1980s as anxiety about waste increased. It has become a special target because, while so many plastics are disposable, plastic lasts forever in the environment. Biodiversity is starting to collapse because we are making, using and disposing of so much plastic. It is time to take care of the environment by preserving the beautiful planet for future generations. What must we do to conserve our awesome planet?

2. Methods and Results

At Ritsumeikan High School, we held an international conference called Rits Super Global Forum (RSGF) in November 2019, to discuss plastic waste, and think of solutions for solving the problems related to it through each stage of waste movement - production, retailers/distribution, consumption, disposal and movement of garbage. At the end of the conference, we created a pledge which was the fruit of our labor after many deep discussions with students from overseas.

In addition, after returning from Bali, our students formed a group called *Bye Bye Plastic Bags Kyoto*. We made *eco bags* using biodegradable or environmentally friendly materials, and started using them in our everyday life. We were able to spread this sustainable environment idea step by step to like-minded international student representatives at RSGF2019. For further actions, we want to suggest to the Co-op, a small sundry shop at school not to use plastic bags. We will propose to our school to have more students learn how to separate garbage properly, and have a plastic clean-up campaign in some sightseeing spots in Kyoto. As consumers we have a huge power for combating a carbon-emitting eco-unfriendly society, and we would like to alert you to have a more ethical approach to acting. We want to inform you to think more about what you can do as a consumer.

3. Conclusion

To conclude, there are a lot of solutions for combatting a non-environmentally friendly society, and we need to recognize it as a consumer who is unintentionally engaged in creating an unsustainable world.

When you are shown the facts, we believe that your way of thinking needs to change, and as one of the teenagers here, we need to be the vehicle of change to help tackle international social issues.

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Mottainai Goals

How do we make our glocal future?

W201907-1: Osaka Prefectural KITANO Senior High School

W2019
07-1

Key Words: Glocal, local, global, goal, student, lifestyle, agriculture, energy

1. Introduction

Do you know about Japan well? We had a good chance to think about that. We went to Hawaii last summer to learn about sustainability. During our stay, we were surprised that Hawaiians really love Hawaii. And we were disappointed that we didn't know about Japan well. Therefore, visiting Hawaii was a good opportunity for us to think about it. We decided to study about the current situation in Japan.

2. Methods and Results

After coming back to Japan, we wanted to make our goals something that even students can achieve and think about easily because a lot of young people cannot take action even though they know that they should do anything.

First step is using one good item for as a long time as you can. Recently, we can buy new things easily at a cheap price. In the past Japan, people believe that all the things also have lives. If people start to cherish one thing, the amount of garbage will decrease and we can reduce the energy to produce things.

Second one is *washoku*. Japan is an island country surrounded by the sea, but now we rely on imported food. So if any international issues or abnormal weather occur, we will lose our food. Also western food become much more popular, but we have to realize again how healthy *washoku* is to our bodies. By choosing *washoku*, we can reduce the energy to import.

3. Conclusion

Our goal is accomplished! We created an Instagram account so that more people could understand our goals. From that account, we will report our goals and about our research to you.

And while we were preparing for our reports, we realized that these goals were complex to tell people. To accomplish our goals more easily, we have to improve our goals to be narrower — from whole Japan to Kansai or Osaka so that we can carry out our research closer to our community.

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A New Perspective On Hashtag Use: Racial Discrimination

W201907: Osaka Prefectural Tennoji High School

Key Words: racism, hafu, multi-racial

W2019
07-2

1. Introduction

Prejudice and discrimination can be difficult subjects to discuss. However, there are very good reasons to get past our discomfort and face these important issues. In recent days, the great results of the multi-racial people, such as Naomi Osaka, Rui Hatichmura. in the sports world, and in addition entertainers, have been in the spotlight. Due to the way media portray them, Hafu, biracial people, are very subject to many stereotypes and biases. What is worse is we discriminate those who have roots in multiple races without knowing it. Some Japanese high school students have faced discrimination during their trips abroad, namely racism. We were forced to face the fact that we are a member of racial minorities. Realizing that racism needs to be eliminated made us look for “racism” in our daily life. That is why this study is focusing on Hafu discrimination.

2. Methods and Results

A survey was conducted to the students in a public high school in Osaka prefecture about Hafu. The students were divided into two groups; the first group was shown an article on discrimination against Hafu, and the second group was not shown the article. First, all of the participating students were asked questions about their ethnicity and told to freely write about what they think about Hafu. Then, only the first group was instructed to read the article on Hafu, and later to fill out the same survey again. The results showed the students that were shown the article tended to write about how they did not know about Hafu discrimination, and did not write anything that could be perceived as stereotypical. However, many in the first group wrote words that could be perceived as stereotypes.

3. Conclusion

The present study revealed that by making people aware about the Hafu discrimination problem, they tended to take that into consideration when choosing their words. The results suggest that raising awareness about a problem helps reduce the severity. As a future direction of this study, we're going to create a hashtag on Twitter about Hafu discrimination. This is called hashtag activism, which is defined as a discursive protest on social media united through a hashtagged word, phrase or sentence. This type of online protest brought renewed attention to the power of digital activism in shaping public discourse. That's why by utilizing hashtags, we would like to raise the awareness about Hafu discrimination to Japanese high school students.

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Awards

‘uminom’

~Drinking Straws from Banana Paper for Less Plastic~

W201907: Osaka Prefectural Mikunigaoka Senior High School

Key words: plastic waste, marine life, paper straw, banana stem, the Philippines

W2019
07-3

1. Introduction

In recent years, plastic waste is an environmental concern that has serious impact to marine lives. Some major companies such as Starbucks have decided to abolish the use of plastic straws. However, since deforestation may be an issue with paper straws because of the need to cut down trees, paper straws are not exactly good for the environment. An alternative material can be banana paper made from banana stems, which at present, is considered mostly as waste in the Philippines. To reduce plastic waste and help maintain sea environment, our team proposes the use of banana paper straws from banana stems as an alternative to plastic straws.

2. Methods and Results

Firstly, we researched on the properties of banana paper and found that it is water resistant and durable. In order to test its durability, we conducted a water resistance experiment at school. From our results, we found that banana paper can stand water about twice more than other types of paper.

Secondly, some of us went to Enderun Colleges in the Philippines and talked with local college students. They mentioned that young people wanted to earn money to pay school fees, but there are not many jobs to get enough money. Based on our discussions and the economic and social condition of the Philippines, we created our business plan: To make banana paper straws ‘uminom’ in the Philippines.

Our product ‘uminom’ is made of banana paper from banana stems, and we buy the stems from banana farmers in Philippines. By selling the stems to us, farmers can receive additional revenue for the stems they would have thrown away as waste. Moreover, we employ college students in the Philippine as factory workers and they can get better income to their cover their school fees.

3. Conclusion

‘uminom’ : 3 big advantages for Philippine life and environment.

1. Reduce the amount of waste plastic straws
→ Stop increase in plastic waste and lessen impact on marine lives
2. Reduce the amount of ordinary paper straws → Reduce deforestation by cutting less trees
3. Reduce the amount of banana stems as waste → Additional revenue for Filipino farmers
4. Increase employment → Help college students in Philippines

Therefore, ‘uminom’ has a potential for aligning with SDGs.

(10. Reduced Inequalities, 14. Life Below Water, 15. Life on Land)

If our product ‘uminom’ becomes widely used, both the amount of used plastic straws and ordinary paper straws will decrease. Lesser plastic straws stop increase in plastic waste in the sea, and that of using ‘uminom’ straws stops deforestation.

Finally, we hope that people become more responsible in protecting marine lives by using banana paper straws ‘uminom’. Everyone must be active in solving environmental problems and in protecting the environment!

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How Women's Sense of Beauty Affects Onset of Anorexia

W201908: Kobe Municipal Fukiai High School

Key words: Anorexia, Body image, Dieting, Fashion, Sense of beauty

W2019
08-1

1. Introduction

Anorexia is known as a serious health problem worldwide. According to Our World in Data (2018), there are more than 2.6 million patients with anorexia. Japan has about 75 thousand patients. The number of patients is increasing and most of them are young women. Anorexia has negative effects not only on the people in question but also the next generation. There are three causes of anorexia: psychological factors, biological factors and social and cultural factors. In modern Japan, people tend to place high value on being thin. It leads a lot of women to have the desire to lose weight by dieting. Therefore, it can be said that starting of dieting is indirect cause of anorexia. The purpose of this study is to reduce the number of women who can't stop extreme dieting focusing on social and cultural factors.

2. Methods and Results

This research process was based on information gathered from research papers, books, online articles and interview. This literature was used to understand current information about anorexia and how to treat eating disorders. Interviews were conducted with Hiromi Oyama, who is a curator at Kobe Fashion Museum and with a clinical psychologist named Konoyu Nakamura at Otemon Gakuin University.

Nakamura (2011) shows that even though many female college student's BMI are appropriate (BMI above 18.5), about half of women think that they are a bit fat by self-evaluation. The thoughts that they have for their body image are different from reality. One of the causes of a culture where people place high value on being skinny is changing trend of clothes. In the past, plump women used to be a symbol of beauty. In modern Japan, long skinny arms and a small face is a symbol of beautiful women. It is because models from overseas and influence by the media affect women's sense of beauty. Therefore, the fashion industry, media and influencers such as fashion models can be seen as the cause of spreading culture where people place high value on being skinny.

3. Conclusion

In order to reduce unnecessary dieting among women, the government, mass media and individuals should all take responsibility. As individuals, Japanese people have to raise their awareness about anorexia and the seriousness of unnecessary diets. Also, they should encourage the government to set up regulations which restrict the employment of models. Eventually, models seen in the mass media will be diverse, and this will also change the women's ideal body image affected by mass media. This proposal should be shared with young people, especially those who are interested in fashion. Through these actions, new sense of beauty will prevail in the society.

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Awards

大阪大学 国際公共政策コンファレンス 優秀賞 (パワーポイントによる口頭発表)

Flood-control measures by Kobe city and its enlightenment activities

SGH W201908-2 : Kobe Municipal High School of Science and Technology

Key words: disaster prevention,

W2019
08-2

1. Introduction

Our city Kobe has various kinds of disaster prevention measures, but still has some risks because it is located between the sea and mountains. So we started a campaign to give its citizens enough knowledge about the risks of disaster and disaster prevention measures. In this research, we have two purposes. One is to make the citizens more aware of and interested in the prevention and reduction of disasters. The other is to take actions to make the city more resistant to disasters.

2. Methods and Results

Duration of research: April 2019 – January 2020

1. Research to improve our knowledge of prevention and reduction of disasters.
2. Investigation outside school
3. Classified complex disasters into three groups:
 - I . Floods and landslide
 - II . Earthquakes and liquefactions
 - III. Tsunami and floods

We made models and panels to show each of them.

4. Discussed the ways of preventing and reducing disasters by simulating various scenes of disasters
5. Participated in the disaster drills in order to give the citizen of Kobe more interest in the importance of prevention and reduction of disasters.

We participated in the comprehensive water control exhibition at Kobe Science Museum, and asked the elementary school students to have more attention to the disasters. Children showed great interest in water disaster because they saw extensive typhoon damage on TV the other day.

We explained to more than 300 participants the importance of deeper knowledge of disasters by doing simple experiments.

A lot of people saw and listened to our presentation, and we were satisfied because we had a great impact on the participants.

3. Conclusion

In our simple experiments, it was difficult for me to use words easy enough for elementary school children to understand. Of course, there are a lot of things we have to modify, but we will try to make this campaign better through a lot of practice, and we will prepare for the next event in January.

Finally, we are going to continue this campaign to save as many people as possible from disaster and make people realize that “you are the only one who can protect yourself from danger.”

Aging Society: From the Caretakers' Viewpoints

A Focus on Family with Dementia Elders

W201908: Taichung Municipal Taichung First Senior High School

Key words: aging society, caretakers, dementia, caretaking policies

W2019
08-3

1. Introduction

Aging population is an issue that confronts advanced countries all over the world. Taiwan, in particular, faces such a problem. As population ages, there is greater responsibility of taking care of the elders in a family, which often adversely causes physical and mental burden among the caretakers. Therefore, the researcher takes an interest in how taking care of the elderly actually influences the caretakers' lives. Since each family has different situations regarding caretaking, the researcher narrows down the subjects of this study to families with elders suffering from dementia.

Dementia, a disease that features loss of mental abilities, has become a prevalent concern in Taiwan as population ages. Elders are prone to dementia, and dementia patients require more efforts of caretaking, so the researcher has decided to choose them to be the subjects. As it is not easy to take care of dementia patients, the researcher then takes government policies into consideration to see if they match the caretakers' actual needs.

2. Methods and Results

An online survey was distributed to caretakers of dementia patients, and a total of 68 caretakers finished it. The survey aimed to understand the influence of caretaking on the caretakers, physically, mentally, and financially. It also inquired into the participants' attitude towards the government policies about caretaking. The participants are allowed to leave any comment on the caretaking policies at the end of the survey. The results showed that most of the participants suffer from insufficient sleep, physical discomfort, mental problems, and financial difficulty. Their satisfaction about the government policies also fell below average. Examples of complaints include long waiting time for the service, lack of service in remote areas, and lack of promotion of the policies.

3. Conclusion

The results of this study reveal that caretakers of dementia patients experience many difficulties which influence their lives in a negative way. Also, there is still much room for improvement of the government policies. In the short term, the government should enhance the caretaking system to respond to the needs of the family members that take care of the elderly. In the long term, however, the citizens should be better informed about dementia and its prevention. If we can reduce dementia among the elderly, we will be able to reduce burden on caretakers.

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Exploring Japans Hidden Poverty

W201909: Kwansei Gakuin Senior High School

Key words: poverty, food loss, Certified NPO corporation Food Bank Kansai, field study, interviews

W2019
09

1. Introduction

Food is indispensable for our daily life. However, based on the research conducted by Ministry of Health, Labour and Welfare, about one sixth of Japanese people are living in poverty and they do not have a stable access to a healthy diet. Despite this, according to the Ministry of Agriculture, Forestry and Fisheries, 5 to 8 million tons of edible food is discarded per year in Japan. We realized that this is a serious problem, and so we decided to search for organizations trying to tackle this issue. We found an NPO called Food Bank Kansai, which is working to connect people who don't have sufficient food with food providers (e.g. companies and individual families). We plan to interview volunteers and staff who work there in order to solve the problem of food loss and poverty. We want to think about what we can do as high school students to stop the cycle of poverty.

2. Methods and Results

In order to prepare for the upcoming field study to Food Bank Kansai, we researched about the topic of food loss, the situation of single-parent families, and the activities that Food Bank Kansai carries out. Based on the results, we came up with a list of questions that relate to the following points:

- How does Food Bank Kansai raise awareness about the problem of food loss?
- How does Food Bank Kansai link with food providers (companies, organizations)?
- How is Food Bank Kansai handling the problem of diminishing support and increasing food demand?

After conducting the interview and observing their daily activities, we will come up with ideas to tackle this problem.

3. Conclusion

The field study is scheduled on the 10th of December, so our research is still a work in progress. It would be too early to make any conclusions at this moment. However we want to focus on the importance of building a local and international network which can help people in need. Moreover, we believe it is necessary for all of us to take responsibility for solving this issue instead of ignoring it.

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Microplastics: Effects and Countermeasures.

Whose responsibility?

W201910 Hiroshima Prefectural Hiroshima Kokutaiji Senior High School

Key words: Microplastics, Food chain, Ecosystem, Pollutants

W2019
10-1

1. Introduction

In recent years, marine pollution, especially the problem of microplastics (hereinafter referred to as MP), has attracted many people's attentions. Some literature states that MP has already entered the Earth's food chain, including the human one, and that we may be eating a lot of MP. However, no specific data on the direct effects of MP on humans was found in the data we examined. Therefore, we decided to investigate the impact of MP on people and the environment, and to research countermeasures against MP.

2. Methods and Results

[1] Effects (to investigate the effects of MP in the food chain)

We removed the internal organs from Japanese anchovy that we bought in the supermarket, ground them with water, put one of them on a slide, and observed it with a microscope. As a result, we were able to confirm the existence of MP.

Next, we researched the effects of MP in the published literature. These are the main points we found:

- Plastics themselves contains many additives, and some chemical substances dissolve in seawater.
- An environmental hormone that causes breast cancer can be detected in the caps of plastic bottles.
- Plastics have the property of absorbing pollutants from seawater, and when ingested, they tend to concentrate in the human body and cause health problems.

[2] Countermeasures

Oyster is famous as a special product of Hiroshima Prefecture. However, the plastics in rafts used for oyster farming are a problem. We interviewed people at a fishing company that is developing a farming method to solve the problem.

They are testing a new type of raft that doesn't pollute the sea, but further testing is required to verify if the size of the oysters produced will change.

3. Conclusion

In the future, we would like to inform local people about the effects of this research and possible countermeasures and think about who is responsible for this problem, while continuing this research.

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Purifying Water Leads to World Peace

W201910: Hiroshima Prefectural Kuremitsuta Senior High School

Key words: Safe water, Purification, Nature, Clams, COD

W2019
10-2

1. Introduction

A lack of safe water is a serious global issue that we must solve. The United Nations aims to “Ensure availability and sustainable management of water and sanitation for all” as its sixth goal of “Sustainable Development Goals (SDGs).” The “World Water Forum,” which is an international congress that discusses water problems on Earth, is also held every three years. However, a lot of problems are still unsolved. For instance, 663 million people don’t have access to safe water, and 300 thousand babies and little children die due to dirty water.

One purpose of our study is to purify rivers and to improve the world’s water quality. It enables us to provide clean water from rivers as drinkable water and agricultural water for people all over the world. That will lead us to a peaceful world where many people can live safely.

2. Methods and Results

First, we researched water quality of four rivers in Hiroshima Niko River, Sakai River, Kurose River, and Misakaji River from upstream to downstream. We used COD, or Chemical Oxygen Demand, as a measure of water quality. It is one of the representative water quality indicators, also known as oxygen consumption, showing the amounts of oxygen required to oxidize substances in water. The higher COD score is the lower water quality is.

We searched the surroundings of the river and classified them on the basis of “abundance of nature” and “the number of houses.” The research shows that rivers surrounded by nature and few houses tend to have lower COD. However, Misakaji River showed low COD though it is surrounded by little nature and many factories. In order to find why, we searched the river and its surroundings again. As a result, we found out that there were a lot of clams on the bottom of the downstream. That is when we got an idea of using clams in order to purify water.

Second, to verify clams’ capacity of purifying water, we did an experiment. We prepared two beakers with 1 liter of seawater and 3 milliliter of soy milk. Ten clams were added to one beaker, and none to the other. Then we observed changes in the water of the two beakers. In order to compare changes of water of the beakers, we measured COD every hour and put cards on which some characters were written so as to measure changes of transparency. As a result, we couldn’t see the changes of COD, but after five hours and a half we could see the characters written on the card.

Consequently, clams have the ability to improve water quality.

3. Conclusion

This study shows that water quality of rivers surrounded by rich nature tends to be clean, and clams relate to water purification of rivers. From now on, we need to consider how we can apply the results of the experiment using sea water to fresh water. We need to confirm the connection between nature and water quality of a river. If this study is developed, we can purify water of rivers and secure safe water in the world. Finally, we would like to realize a peaceful world where all people can get clean water.

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The Desire for a World without Nuclear Weapons to the World from Hiroshima

W201910 Hiroshima Prefectural Fukuyama Seishikan High School

Key Words: Elimination of Nuclear Weapons, Nuclear Umbrella, the Reality of Nuclear Warfare, Peace

W2019
10-3

1. Introduction

As August 6th was approaching again this year, we heard the news that the survivors from the atomic bomb are getting old and we decided to research more about war. Then, we began to wonder, why are nuclear weapons still around even though everyone knows the horror of nuclear weapons?

2. Methods and Results

(1) Through our activities as UNITAR Hiroshima Youth Ambassadors

We learned that there are various problems facing the abolition of nuclear weapons, such as the withdrawal of the United States from the Iran nuclear agreement and the INF treaty and the lack of participation in the Japan Nuclear Weapons Convention. We also found out that there are eight countries with nuclear weapons in the world, and none of them have signed the Treaty on the Prohibition of Nuclear Weapons. They insist that a treaty banning nuclear weapons should not be realistic from the aspect of nuclear disposal and that nuclear weapons should be necessary to protect their own country as nuclear deterrents. Unbelievably, our own country, Japan has not even signed it, mainly because it is placed under the US “nuclear umbrella”. Even some countries without nuclear weapons, which receive security benefits from them, cannot demand the elimination of nuclear weapons in public.

(2) Through the short-term exchange program with our sister school in Norway

We visited the Hiroshima Peace Memorial Museum and had a talk with the Norwegian students about peace. We really came to understand what had happened in Hiroshima and the horrific power of nuclear weapons. Just one bomb destroyed the whole city. Just one bomb killed tens of thousands of innocent people. Just one bomb changed the lives of millions of innocent people. About 75 years ago, students around the same age as us became victims of an atomic bombing. Seeing their tattered belongings tells us something very important without words. After we talked about peace, we concluded that for us high school students, peace means that there is no war and that everyone lives a happy life without discrimination or inequality. In order to build a peaceful world, everyone should trust each other and have dialogues aimed at the abolition of nuclear weapons and the realization of peace.

3. Conclusion

It is important to listen to the stories of what happened on the morning of August 6th from the victims themselves and pass it down, and to preserve buildings from the time of the atomic bombings. In addition, we should continue to spread our message to the world we can in any way. A student from Norway told us, “I knew that nuclear weapons were awful, but after visiting the museum I was able to learn how terrible nuclear weapons are.” That is the point. It is important to keep on sending messages from Hiroshima so that many people can visit Hiroshima and see the truth. We are now still just high school students, but we can make a movement and we are responsible for the future, 10 and 20 years from now, so why not know the truth of what happened at 8:15 AM on August 6th in Hiroshima and share how we can make a peaceful world?

The school that cultivates who creates new era

G1901 Hokkaido Noboribetsu Akebi secondary school

G1901

LGBT, School, Society

Introduction

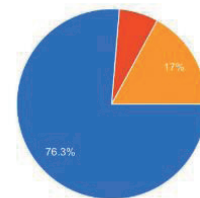
Today the society is in an era of diversification due to LGBT perceptions and globalization. As a result, some existing values and perceptions are out of line with the times. We thought we should update our values and perceptions. A good society comes from good schools. We set this as a guideline, and decided to explore the future of school and society.

Methods and Results

First, we had a meeting with LGBTs about 3 months ago. Then we found that the law is not good for LGBTs in Japan such as same-sex marriage.

Second, we conducted a questionnaire survey that targeted our school students and LGBTs. Through this survey, we were able to find a lot of problems and evidences.

Do you have LGBT friends?

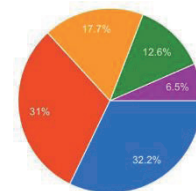


Yes	76%
No	17%
I don't know	7%

Conclusion

At first, we placed great importance on respect for the minorities within society. Ultimately, we have come to the conclusion that it is necessary to create a society in which each person can play a full active role by making use of the individuality.

When did you find your sexual orientation LGBT?



Age	%
6~12	32
12~15	31
15~18	18
18~	12

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Fair Trade Campaign in Kawanishi Town

Number: 1902 Kunori Gakuen High School

Key words: Promote, Fair Trade, Workshop

G1902

1. Introduction

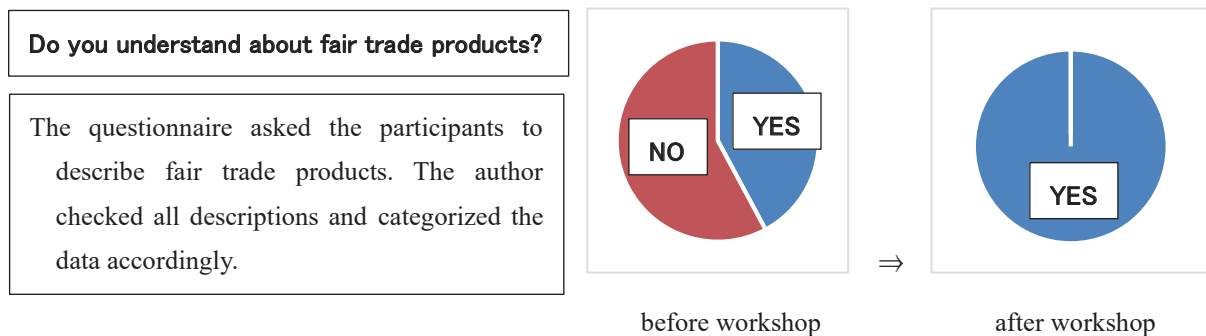
I went to the Philippines to see the reality of poverty last March. The people who picked up valuable garbage in order to make a living always smiled and looked happy with their family. This experience made me think that I went to help people suffering from poverty in the world. So, I considered what I can do to let people in Kawanishi town know the reality of what I saw.

I learned that Nagoya city conducts a fair trade campaign. Using this campaign, I wanted to apply it to Kawanishi town.

2. Methods and Results

I did a workshop to inform young people about the situation of poverty outside Japan. I visited Kawanishi Junior High School and held a workshop for 36 third grade students. A questionnaire was given to the students in advance. The students thought what they can do to solve the problems in the world and how people in the world make happy.

I told fair trade products and the questionnaire was given after the workshop. I examined their answers of the questionnaire to see how the workshop worked effectively. Before the workshop all students knew about fair trade products but only 42% students understood what fair trade products are. After the workshop all students understood about fair trade products. The workshop helped increase a degree of recognition amongst the students not only knowing but also understanding about fair trade.



3. Conclusion

More people are needed to promote fair trade products in Kawanishi town. In terms of future perspective, I will visit the city hall to ask for help and interview the shop owners in the town. I hope that this research will contribute to expand fair trade campaign more and invigorate local communities.

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A proposal to make soil conditioner to improve agriculture in Africa

G1903: Yamagata Higashi Senior High School

Key words: soil conditioner, soybeans, hunger, Africa, reasonable

G1903

1. Introduction

Now, many people are suffering from hunger in Central Africa. There are some reasons. First, the soil in Central Africa is red soil that is rich in oxides, and not good at keeping nourishment. Second, the diet is unbalanced and it is likely to be slanted toward carbohydrates. Third, it is hard for small farmers in that area to buy chemical fertilizer and agricultural chemicals because they don't have enough money to do so.

To solve this problem, we are doing experiments to make soil conditioner that "everyone can get reasonably and easily." In this research, we raised soybeans and observed them. We hope this study will help to improve the agriculture in Africa and reduce the number of people who suffer from hunger. In addition, we want to help to achieve SDGs target2 of "NO HUNGER."

2. Methods and Results

We raised soybeans under seven conditions. We used three kinds of soils and two kinds of fertilizer.

About soils, we used red soil in Okinawa, industrial grass beads, and black soil. We employed red soil and grass beads because they are similar to the soil in Central Africa. We also used black soil for comparison. About fertilizer, we used banana peels and egg shells. We dried banana peels and cut them into small pieces. They are rich in Ca, K, and P. We crushed eggs shells. They are rich in Ca. We used them because the production of bananas and eggs is large in these areas. We expected that soybeans with banana peels or egg shells would grow well. After growing, we counted the number of germinated soybeans, leaves and beans, and measured the height and thickness of stalks. From this data, we found that the number of germinated soybeans with banana peels and egg shells was small, and the height of them was also low.

We considered that germination rate seems to change depending on the pH of soils. Therefore, we did a second experiment to measure the pH of soil and expected that the pH of soil whose soybeans grew well would be close to that of black soil. We dissolved soil in water and measured pH, but we couldn't find any significant difference.

3. Conclusion

From this research, we concluded that something prevented the growth of soybeans, so we should research the reason. In the future, we want to raise soybeans under different conditions, and make really good soil conditioner. Besides, we want to plan how to introduce our project to Africa.

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Learning by Volunteering

～Exploring the Meaning of Living Together

through Visiting a Village of the Akha People in Thailand～

G1905, Showa Women's University Senior High School

Keywords: Volunteering, Mutually enriching, The Akha people: an ethnic minority in Thailand, Rebuilding connections, Community, Harmony, Diversity, Knowing, Potential of volunteering in a multicultural and global society

G1905

Introduction

Our research started in 2018 with our mentor, Professor Koroki Hiroshi of Showa Women's University. We participated twice in week-long work camps held in the mountains of Thailand, and had a homestay with the Akha people in Apha village. Through the work camps, we came to understand a new meaning of volunteering, one which is mutually enriching, rather than one-sided. We also realized that volunteering is an especially effective way of promoting multicultural understanding among diverse people. This is particularly relevant to Japan, an increasingly globalized and aging population with a low birth rate which creates a need to accept immigrants into our society.

Methods and Results

Our group has attended monthly lectures by Professor Koroki, and has been involved in volunteer activities as well. The following list covers our main activities for the previous year and a half since spring 2018.

Time	Activity	Content	Place
Spring 2018, 2019	Lecture	The Universal Declaration of Human Rights, The issue of refugee	Showa
Spring 2018, 2019	Lecture	Wealth disparity between the rich and poor in the world, Fair Trade	Showa
Spring 2018, 2019 Winter 2018	Lecture and Volunteering	Fairtrade Project with NGO Shaplaneer: sales at school (stationery, accessories, food, etc.)	Showa
Summer 2018, 2019	Volunteering	Collecting used stationery at school and taking them to children in Thailand	Showa/Thailand
Summer 2018, 2019	Lecture	Minority mountain people in Thailand, Significance of SDGs	Thailand
Summer 2018, 2019	Volunteering: a work camp	Homestay in Apha village for three days, visiting a nursing home, kindergarten and elementary school for minority mountain children, and riding elephants. (One week)	Thailand
Winter 2020	Guest speakers	Japan Association for Refugees (JAR) with a former refugee from Africa	Showa

Through these experiences, our definition of volunteering has expanded: knowing, learning and experiencing with the intention of co-creating a better society is volunteering; sharing our learning and experience with others is also part of volunteering. In Thailand, through visiting various schools, playing with children, and home-staying with Akah families, we helped promote mutual understanding with the people we met, and we discovered that this in return allows the Akah people to strengthen their own cultural identity and pride. Furthermore, we experienced the Akha way of life, where the bonds of family and ties between villagers remain strong. This enables us to seek a vision for a better future for Japan, as our society is becoming increasingly fragmented and people seem to suffer from weakening social connections.

Conclusion

Volunteering is a mutually enriching process where people come together in action, to discover a vision for a society where diverse people can live in harmony. It is a powerful means for people both young and old, and from all walks of life, to rebuild connections with each other. It is this restoration that we'd like to commit ourselves to. For we believe this leads us to achieve SDGs together, which is a common mission our world urgently needs to fulfil today.

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Let's make our treasure a national treasure and make our town popular by Furusato nozei donation program

G1906: Fukui Prefectural Maruoka Senior High School

Key words: ties with castle fans, original donation, a national treasure

G1906

1. Introduction

We are proud of Maruoka Castle near our school. Maruoka Castle is a symbol of our town. We are cooperating with a group of local residents and city officials to make the castle more attractive and make it a national treasure. Once it is designated a national treasure, many people will pay attention to our town and many tourists will visit our town. We want our town to be more attractive for people in other prefectures. To make our town popular, we invented a way to use our original Furusato nozei donation system from castle fans. We think this system can be useful in other countries.

2. Methods and Results

We solicit ideas from castle fans to make the castle attractive. We need their points of view, so we invite them to the events or meetings to talk about how our town will prosper. Unlike other Furusato nozei programs, we have castle fans donate more than 2,000 yen a month. We encourage them to donate every month by giving points according to their donations. The more points they get, the more benefits they get. Together with a group of local residents and city officials we, students, talked about the benefits which castle fans would like. For example, they can get free admission to the castle, pamphlets full of castle information, a piece of paper craft of the castle, etc. Also, they can wear armor, which we think they desire.

We invited them to tours around the castle. We, students, wearing Yukata gave them a map and soba sweets that we made. We also publicized our program through SNS such as Instagram. Castle fans told us they were impressed that high school students are involved with this program and our opinions are reflected in this program.

In this way, through the donation program, we can deepen ties with castle fans. Castle fans have strong interests in castles, so we can get great ideas from them. In the meetings after the tour they advised us to make cafes around the castle and to bury utility poles so that they can take good pictures of the castle. They also advised us to have rental bicycles, sightseeing buses, and accommodations. We hope that as many of their ideas as possible will be realized and Maruoka Castle will be listed as a National Treasure. Considering the ideas of castle fans, local residents and ourselves, city officials will choose possible ideas and enforce them in April.

3. Conclusion

We need more donations to realize the castle fans' ideas. Therefore, we should think of appealing activities so that they will continue to donate to our town. Still we think our efforts can be used in other areas. People in regional town in other prefectures also hope their town will come to life. Residents want their treasure to be a national treasure and want to revitalize their town. We think this situation is true of other countries. Recently, people in other countries such as South Koreans are interested in Furusato nozei program. We are sure that our unique Furusato nozei donation program can be helpful all over the world.

Ideal Teachers for 2030!

Convincing today's children to become tomorrow's teachers

G1907: Nagano High School

Keywords: teacher, education, attractive, teenager, quality, inspiring students to become teachers

1. Introduction

First of all, we are all interested in the decreasing number of teachers. It seems that the career is not attractive to young people. So we decided to discuss and research teaching problems from all over the world.

According to our research, the tasks that teachers have to do have been increasing in number day by day. Teenagers in many countries would probably not be interested to be a teacher. Some countries are facing a lack of teachers, which makes current teachers work much more, including more overtime as well.

G1907

2. Methods and Results

A) Lunch meeting

We had a lunch meeting every Thursday. In our group, we have an exchange student from Laos. Together we compared the situations between Laos and Japan. Through our meeting, we found that the decreasing number of teachers is a common problem in both countries. And we also focused on the problem that teachers are overworked, but that their salary is very low.

B) Interview

We went to Taiwan for our school trip this November. Starting with the Education Bureau at the Kaohsiung City Government, we had a chance to visit many places and interview people around the country. We became friends with Taiwanese high school students too. Through these experiences and connections, we learned about the situation in Taiwan. Also, we asked some questions to students in our high school.

3. Conclusion

We suggest 2 ways:

First, allow children to learn the following: how teachers work, what responsibilities a teacher has, the advantages and disadvantages of being a teacher. These can stimulate teenagers or students to be more interested in becoming a teacher. Some activities, such as participating in a study-tour and working closely with teachers, could help to show young people the important role of teachers. We truly believe that these activities will inspire students to become a teacher.

Second, supporting and taking into consideration the significant role of teachers is also important. For example, we should increase the salary or budget allocated in this sector, because being a teacher is an occupation which provides knowledge to all ages, children and adults.

About regional development by green tea -Through Taiwan and Seattle -

G1908 Haibara High School

Key words : green tea, traditional industry, global partnership

G1908

Introduction

The city of *Makinohara* in Shizuoka is one of the most famous green tea producers in Japan. We study at *Haibara* high school in *Makinohara*. We have become aware of our city's problem, the economic decline because of depopulation. Recently, less people have tended to drink green tea in a traditional way, using teapot called *Kyusu*, because plastic bottle drinks have been popular. Also, the number of farmers who give up the production of green tea and abandon their farmlands has been increasing. As we know this situation, we feel that we must do something to revitalize our city. So, we went to Taiwan and Seattle in the US in order to find solutions from a worldwide viewpoint.

Method and results

We went to Taiwan last December and saw many places related to tea culture to find the reason why traditional culture is preserved still today. At *Dakeirouchabyo*, which is a tea laboratory, we learned their history and how they are preserving Taiwanese traditional tea culture. Another day, at *Zen* tea restaurant, we experienced *Yamucha*, which is the traditional Chinese way to enjoy tea. We enjoyed Chinese traditional tea style and we got to know that recognition of tea is different between Taiwan and Japan. Learning from Taiwan, we thought it is important to keep green tea culture in Japan.

Last August, we visited *Sugimoto America*, the Japanese tea laboratory in Seattle. Through this visit, we learned how good green tea is for our health. Green tea has much nutrition which has good effects on our bodies. For this reason, green tea is regarded as “super food” in America. We thought that it is a good idea that we promote green tea as a super food in Japan, such as chia seeds, acai and coconuts.

Conclusion

From the experiences in Taiwan and America, we have found out three things. First, Japanese green tea is known as “super food” overseas. Second, “Japanese tea culture” is very important. Third, exporting green tea overseas creates connections with overseas. Also, we came up with two ways to solve the problems in *Makinohara*. One way is that we promote green tea as a super food. The other solution is that we will try to preserve tea culture in Japan. By building the facilities to succeed green tea culture, we may become more familiar with green tea. In addition, we should spread the traditional way to drink green tea. So, we can keep our green tea culture. In these ways, the tea consumption will be increasing and *Mkinohara* city will be revitalized. At the same time, we can solve the problems of declining birthrate and aging population. Therefore, we will support the traditional green tea industry in *Makinohara*.

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Making Our City Brighter, with Foreign and Senior Citizens Shining

– Creating a Bridge to Inclusion Respecting Diversity ! –

G1909: Seijoh Senior High School

Key words: Coexistence, Collaboration, Diversity, Inclusion

G1909

1. Introduction:

Local issues in Toyoake city, Aichi, include the need for the harmonious coexistence of foreign citizens with local residents, as well as enhancing the health and welfare of elderly citizens. Why don't we feel a sense of unity with foreign citizens? Why don't we interact with senior citizens for their happiness? And what do we need to do to create a sense of unity with the foreign community and elderly people? Our hypothesis is that if we create some collaborative activities with each of them, we can build a new bridge for both foreign and elderly citizens to shine and live happily.

2. Methods and Results:

First of all, we examined the number and ratio of foreigners and elderly people living in Toyoake city. We realized that the number of Brazilians has remained high, and that of Vietnamese has been increasing remarkably. And it turned out that the aging rate of the population in Toyoake city has exceeded 25%, and that there are also many elderly people living alone.

Secondly, we began to participate in local activities to interact with both groups. Every Saturday we took part in healthy exercises with the elderly at *Sugi* pharmacy. Every Thursday we volunteered to teach foreign children at an elementary school. Both the elderly and the foreign children seemed to have a lot of fun interacting with us. We learned from these activities that they really enjoyed these exchanges. We cannot forget their smiles and the feeling of unity with them.

Third, taking advantage of these experiences, we decided to create a new local activity. Its name is "Project to make our city full of flowers." On October 19, about 70 elderly citizens and about 30 foreign citizens made a flowerbed with us and planted many flowers. They planted the flowers very joyfully and were full of smiles. We also enjoyed a sense of fulfillment.

As a result, we were able to create activities that allowed the elderly, foreigners and all of us to shine. In other words, we created a new bridge where the elderly and foreign residents could shine with us, which gave us great joy.

3. Conclusion:

1. By nurturing diversity, we can advance local activities to facilitate coexistence and collaboration. 2. Our efforts will play a crucial role in creating the bridge. We will continue to promote local activities to enable all citizens including foreigners and elderly people to work together and thrive brightly. 3. The next task is to create emergency disaster drills with foreign and the elderly residents. By collaborating on life-saving skills, we can further deepen our bonds with them, and at the same time we can spread the spirit of inclusion that respects diversity in our city.

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What is Glocal Exchange?

Starting Sustainable Landscape from Exchanging with Communities

G1910: Nagoya International Junior and Senior High School

Key words: Involving Local Communities

G1910

1. Introduction

Our school is located in Nagoya, Aichi, which is the center of heavy industries in Japan. Like in our school name, “international”, many of our projects are related to international exchanges. However, we came to think that we have not much concentrate on our city, area, and neighbors. We believe that to solve global social issues, we have to start from our nearest communities. Therefore, we gradually focus on program towards our local people. We chose this topic to present the projects we have done with our local communities.

We also had another problem. Lack of experience of presentation, we hesitate on speaking in front of people. We wanted to become a person who is not afraid of going into the public, and who can speak with confidence. To overcome these difficulties, we join in the group called, “Sus-teen!”.

2. Methods and Results

“Sus-teen!” is a group of students in our school who is interested in thinking and taking action to solve global issues. We had a lot of opportunities to discuss with other people and participate in the local events. We would like to show a few of them.

1. “Kankyo-day” (Environment Day)

We participate in “Kankyo-day” or “Environment Day” which was held in Oasis 21. In this event, we discussed about how our trashes are causing many damage in our environment and how we can live together with a person of disabilities. From this event, we improved our communication skills and learned that some problems we have in Nagoya.

2. Tenpaku River Activity

Tenpaku River is a river where it flows in southeastern Nagoya. We joined in the project which to make river clean and attract many people to visit this river. Moreover, as we research deeply, we found out that Tenpaku River has a danger of flooding from huge typhoon. Our group collected many data and made a document that explains our ideas of preventing from flood damages in this area. We believe this will make the river and humans live together.

3. Conclusion

In conclusion, we have done many projects with local communities to solve global issues and overcome our difficulties of communicating with others. Our next mission is to spread our communities’ idea to other area, prefectures, and to the world. In fact, we have already shared our thoughts by using Skype to schools in Namibia, France, Montenegro, and Indonesia. We would like to continue this connecting and widen Sus-teen!’s project in the future.

References

None

Awards

None

To Live in Harmony with the Tourist City “Ise Shima” -from the Perspective of SDGs-

G1911: Mie Prefectural Ujijamada Commercial High School

Key words: Tourism, Food waste, AI

G1911

1. Introduction

Ise Shima is an area abundant with history and nature, which attracts many tourists from overseas each year. Even though we have many tourists who visit this area, we are facing problems of population decline and an evergrowing aging society.

We have conducted project-based research at local companies that run their businesses focusing on the SDGs and also at NPOs in Ise Shima area.

In project-based classes, we set nine themes to research on, and a group of about 20 students has worked on each theme. For today’s presentation, we would like to report about a local restaurant called “Ebiya Daishokudo” located near Ise Grand Shrine. We visited the restaurant and conducted an interview-based research. The restaurant started utilizing an AI system and successfully reduced their food waste by 70 percent.

2. Methods and Results

Ebiya Daishokudo is a restaurant that has a history of over 100 years and has been serving traditional local food not only to local residents but also visitors from other prefectures or even from overseas. When they make cuisines that they provide at the restaurant, they make sure that 90 percent of the ingredients they use are locally produced in Mie. The restaurant owner, who has previously worked at Softbank, developed AI system named “TOUCH POINT BI” and has succeeded in greatly reducing the amount of food waste they make. This has been improving the rate of their employees’ taking paid holidays, and automatizing the management of their stock. They have analyzed data such as traffic, temperature, weather and planned events in the community amongst other things using this AI system, and have estimated the demands for the food they need to prepare. By ordering ingredients based on the analyzation and estimation, they successfully reduced the amount of their food waste by 70 percent compared with the food waste they had had before adopting the AI system.

Through the series of interviews, we came to realize that the workers’ job satisfaction is quite high at Ebiya Daishokudo. One of the employees who has been working since even before the adoption of this AI system mentioned, “I didn’t trust machines or technology but now they help us a lot. I hope this town will be more vibrant with the help of AI technology.” Collecting data helps us realize what is needed and leads us to better preparation with less waste. New technology is surely useful for us to solve some of the social problems that we are facing right now.

3. Conclusion

We have learned the importance of bonding between people through the project-based research on SDGs. We would like to continue the research in order to find ways to protect the environment in Ise Shima region, and to create a sustainable society in the future.

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The effect of using standing desks in the class of high school

G1912: Hyogo Prefectural Kaibara High School

Key words: Standing Desk, Local forests, Use thinned wood (cypress),

G1912

1. Introduction

During school, we, students sometimes feel sleepy and do not concentrate. We sit on chairs a large amount of time in school, so it is one of the reasons why we feel fatigued. According to preceding studies, sitting for a long time causes many illness, for example, diabetes, heart attack, cancers and obesity. Furthermore, it increases our death risk.

In Western countries, students are good at discussing, and move a lot while they study in school. It is a kind of “active learning”. Our team built a hypothesis saying that using standing desks in classrooms can reduce the risk of many illness and can lead classes to be better. A Standing desk is a desk which we can use when not only sitting but also standing. We cannot see so many desks in Japan, however, in the United States and Europe, they are very popular.

2. Methods and Results

We asked Kurita Co., Ltd. which produces desks for schools to make new standing desks with our team. We visited a local forest and decided to use local wood.

We administered a questionnaire to our classmates who had used the desks to understand their opinions. As good opinions, when they were using standing desks, they did not have sleepiness, concentrated on studying, became active, and had good posture. On the other hands, they got tired, find it hard to take notes.

We went to do field work in the United States and carried out an inspection of standing desks at schools. This is because we cannot see so many standing desks in Japan. In America, we can see them everywhere like in an office, city hall, library, or school.

3. Conclusion

We discovered the merit of introducing standing desks. On the other hand, we found a lot of problems. So we should think about the way of solving these problems. We should show a lot of merits of using standing desks in order to introduce them.

We should think about cost and comfort when we use standing desks.

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Awards

Clean water for the world

What is the best solution?

G1913 Nara Prefectural Unebi High School

clean water, sanitation, cost, evaporation

G1913

1. Introduction

The goal of SDGs that we decided to focus on is “safety water and restrooms.” Living in a developed country like Japan, it is sometimes hard for Japanese people to imagine that there are a lot of people who don’t have access to clean water. However, we need to think of better ways to help those people get the clean water they need to live. In order to achieve this goal, we first need to investigate the cost, sustainability and safety of distillation devices, filtration devices and the running water wagons that are being used in some countries. Then we will need to collect a large amount of data, information, and test results. Finally, we would like to develop an effective method for those people who don’t access to clean water.

2. Methods and Results

We propose more effective actions for the people who have difficulty obtaining clean water. For example, we will create cheaper filters, an evaporation system, and also provide areas with water wagons, which are equipped with devices for purifying. We will also research how much each device will cost and how much clean water people will have access to after adopting our solutions. It will take many years to make these ideas a reality, so we need to research what causes water impurity, learn more about the environment of the areas we are going to focus on, and think about how we can make the process go as smoothly as we can. Hopefully, after many years we will be able to suggest a proposal by considering the results we obtain from the experiment.

3. Conclusion

We have not arrived at any conclusion yet as we have just started to research this problem.

4. References

None

Our analysis and ideas about ‘over tourism’ around Nara Park from a global point of view

G1914: Ikueinishi Junior and Senior High School

Key words: over tourism, trash, environment, ecosystem

G1914

1. Introduction

In March 2019, in Nara Park, some deer died because they ate a lot of plastic bags. When we heard about the news, we realized how much our trash influences our ecosystem. Furthermore, as more tourists are coming to Nara, we are worried about ‘over tourism’. So, we want to know what people in other countries think about the trash in Nara Park. Then, we surveyed and made a plan to solve the problem.

2. Methods and Results

We asked 133 tourists from overseas to fill out questionnaire forms, and we collected trash in Nara Park. In the questionnaire, we asked 3 questions about trash.

Firstly, we asked “Do you think that there is a lot of trash in Nara Park?” More than 90% answered, “There is little. It is clean.”

Second, “Do you think that there are enough trash containers in Nara Park?” More than 80% answered, “Not enough.” In fact, though we looked for trash containers while we were doing the questionnaire, we could not find any.

Third, “In your country, what do people think about dropping litter?” About 70% answered, “It is bad.” However, many of them said, “I know it is bad, but I still do it.” Besides, about 16% said, “It is common.”

Moreover, we counted the trash while we were doing the questionnaire. The largest amount was paper waste which binds rice crackers for deer and second was plastic waste.

3. Conclusion

From the above results, we found that there are few trash containers around Nara Park and the main problem is plastic waste. Then, we made a plan to solve the problem by following the examples of Bali and Barcelona. The plan is to make plastic bags from cassava which is safe for deer to eat, and put big trash containers which are enclosed on all sides to prevent deer from eating the trash. By doing so, we believe that we can save the beautiful scenery in Nara and our ecosystem. It will make our hometown more sustainable.

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Child poverty solutions

Examining the effectiveness of the “Kodomo shokudo” system

G1915: Wakayama Shin-ai Junior and Senior High School

Key words: Child poverty / Kodomo Shokudo /After school care

G1915

1. Introduction

Japanese poverty for children under the age of 17 has been gradually decreasing from 16.5% in 2005 to 13.5% today. However, this still means that one in seven children is poor. Japan is ranked at 7th in the OCED from this result, and the level is quite high. Additionally, America and Spain are also included in those countries that have high levels. From these results, it is clear that poverty exists not only in developing countries, but also in highly developed countries as well. It is urgent to start thinking of this problem in society since children are not responsible for their situation, unlike adults.

2. Methods and Results

[Field work and Interview survey] We conducted field work and an interview survey. We focused on “Kodomo Shokudo”, which is now rapidly spreading all over Japan. We asked questions to the people who work in Kodomo Shokudo and did some interviews while volunteering there in summer vacation. We found that Kodomo Shokudo satisfies not only the children’s hunger, but also supports them mentally. However, we also found some problems. For example, their budget is insufficient, causing volunteer staff to use their own money. Also, not all children who really need the service are taking advantage of it.

It is necessary to have help from older people in neighborhood to solve these problems. We asked questions to our grandparents and examined the results. It appears that elderly people often look for a new challenge after retiring, so they showed a positive attitude to helping children in their neighborhood. However, we have to consider their physical condition and payment.

[Survey] We also need help from elementary schools nearby to assist our solution. We asked to our teachers to fill out our questionnaire. Based on the results, we found that not so many teachers knew about Kodomo Shokudo.

[Action] We still have not finished the collection and the examination of the results, but we want to present our solution to our local government and get feedback from them.

3. Conclusion

We want to present our idea to combine both “after school care” and Kodomo Shokudo. There is a service called “Wakatake Gakkyu” in public elementary schools in Wakayama city to help working parents. We came up with an idea to create a new service by adding Kodomo Shokudo service to Wakatake Gakkyu to support more children.

This new service has many benefits. It is possible to support regions equally since elementary schools are situated evenly throughout society. Schools usually have a kitchen, so it’s easier to make food for children. By cooperating with schools, collecting the information of children who need help would be easier and more accurate. Combining Kodomo Shokudo and “after school care” will make the users not seem like poor children. Support from OBs, donations from the public, and gifted food from restaurants can all be more easily be made using the convenience of the school. Neighborhood groups can be aligned with schools too. Of course this idea is not complete, but raising awareness of the idea is an important first step.

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What we can gain from learning international Signs

ISL education leads to a global society

G1916 : Okayama Joto High School

Key words: International Sign Language, hearing-impaired,

G1916

Introduction

Today in Japan, we need to be more considerate towards people with physical challenges. Most people are supposed to learn about the difficulties of life with physical challenges in elementary or junior high school. In fact, however, there is a lack of understanding for those who have disabilities, especially for those who are hearing-impaired. Also, due to an information society, they have negative effects on face-to-face communication between young people. Fortunately, the awareness is promoted by learning international sign language (ISL). This study shows the benefits of learning ISL.

Methods and Results

Joto High School students answered questionnaires about the reality of education for the hearing-impaired in their elementary or junior high schools, and we compared with the data from the Japanese International Sign Language Interpreters & Guides Association. Finally, we made a research on academic papers on ISL, and determined the good effects of the ISL's education, and will be an asset for society's future development.

Conclusion

Learning ISL can improve the development of the brain when it comes to speech training. By learning sign language during their childhood, people can get rid of resistance towards communication with gestures. Learning ISL is also expected to benefit our overall communication skills. Especially, it will help us improve oral communication, now believed to be seriously hindered by the spread of SNS, while it will give us another means of communication in global society. Also, people will have less prejudice against those who have hearing-impairment for using sign language, so they can communicate without any hesitation. In addition, the reason "International" sign language should be introduced in education lies in the better understanding of different cultures, and the positive attitudes towards communication with foreign people. We can't achieve this just by ourselves; so therefore, the Japanese government should adopt a new educational system which includes ISL.

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Our Fight against Food Loss

~to find interesting and sustainable solutions~

G1918 : Ehime Prefectural Matsuyama Higashi Senior High School

G1918

Key words : food loss , lunch box , food bank , children's canteen

1. Introduction

In May this year, the "Food Loss Reduction Promotion Law" was enacted, and various initiatives began in the government, companies and private sectors. When we looked into it, the educational activities of the government and other companies like Lawson were not going well. The operation of local food banks and children's canteens was a challenge. In addition, Japanese food loss is increasing.



2. Methods and Results

We surveyed people's understanding of food loss because we thought ignorance about the current state of food loss was the biggest problem. Contrary to our expectations, everyone had some knowledge and understanding. In order to link knowledge and understanding to action, we looked for a fun, sustainable and delicious solution and tried it to see if it was effective.

We first held a vote in each classroom to decide a weekly goal that related to zero food loss. We voted using stickers and the winning goal was to never leave food in our lunch boxes. We expanded it to a point system that rewards us who accomplished our goal each week. In addition, we tried including our families in the food loss effort by encouraging families to make their own goals and put them up on the refrigerator or in the kitchen as a daily reminder.

3. Conclusion

This proposal was introduced to various high schools in Japan and overseas and brought about a certain change in awareness and the effect of reducing food loss. In the future, living in the country of MOTTAINAI, we would like to think about ways to raise awareness and action of treating things carefully not only food but other resources.

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Designation of Calyptogena soyoae Fossil Assemblage as the Municipal Cultural Property

Working on Conservation for Local Natural Heritage

G1919 Kochi Prefectural Muroto High School

Key words: City-cultural property, Conservation, natural heritage, Calyptogena soyoae

G1919

1. Introduction

Fossil Assemblage of Calyptogena soyoae is found in Mitsu Coast, in the western part of Muroto Peninsula where is protected by National Park Act. There are only a few reports that the fossil assemblage can be observed in Japan. Even though the site is already covered by the National Park Act, it only protects landscape of the area. Muroto High School students, therefore, work on designation of the fossil assemblage as municipal cultural property to conserve it as local natural heritage.

Calyptogena soyoae is a deep-sea animal living in 700-1200m below sea level. Due to the land-uplift caused by plate movements and earthquakes, those fossils can be observed on the ground in Muroto City. It is one of the significant evidence the land of Muroto has been uplifted.

2. Methods and Results

- 1) Collecting previous research references on Calyptogena soyoae
- 2) Field research on Calyptogena soyoae
- 3) Having discussion with Muroto City Education Board which controls municipal cultural property designation: making documentations
- 4) Submitting documentation to Muroto City
- 5) Calyptogena soyoae at Mitsu Coast was approved as the municipal cultural property in June 2019.

3. Conclusion

The designation of Calyptogena soyoae fossils as the municipal cultural property will protect/conserves the fossils from abuse. This decision can force all of researchers to submit an application form to collect fossils for research use. It will make clear how many research is implemented with the fossil at Mitsu Coast.

The City, moreover, can accept subsidy to preserve the new municipal cultural property. Due to the location of the fossils, typhoon or sea breeze/water erosion will be the biggest issue for the fossil preservation.

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Awards

Non

Connecting Young People and Politics

～Aiming to Increase the Voting Rate of Young People～

G1920 Miyazaki Prefectural Gokase Secondary School

Key words: lowering voting age, political interests, early polling places, sovereign education

G1920

1. Introduction

Japan's voting age was lowered to 18, starting with the national election in 2014. The average rate in Japan is below the OECD average, and voting rate among the young is particularly low compared to other countries. The low voter turnout is connected to the increase in policies that benefit older voters, who have a higher voting rate. Previous researches also shows a low-voting-rate generation may be affected by the "cohort effect" even when they get older. Raising the voting rate among young people will lead to reflect their opinions on politics and encourage their political participation. The aim of my research is to explore ways to improve the voting environment and promote political participation for raising the voting rate among young people.

2. Methods and Results

Studies by the Miyazaki Prefecture and OECD show that Japanese young people have a relatively low voting rate and interest in politics. Possible reasons as follows: (1) the poor voting environment which does not allow voters to go election easily and (2) less political awareness which comes from the lack of knowledge and understanding of political efficacy. In this research, two goals are proposed to examine the hypothesis.

- 1) Exploring solutions to the problems mentioned in (1)(2) above and making a proposal to the local government.
- 2) Exploring ways to increase political participation, based on surveys, questionnaires, and an experimental class at school

3. Conclusion

Based on the literature review, interviews and surveys and so on, this study reveals two findings. 1) In terms of the voting environment, the key to improve the situation is "limited time and access to voting places". Setting up voting polls at schools, mobile voting booths, and transporting voters to voting places are suggested for possible solutions. Although the solutions were feasible, there is still room for discussion about lack of fairness and manpower. 2) Based on the survey of young people's views about elections, reducing anxiety towards voting resulting from a lack of knowledge and increasing an understanding of political efficacy are the keys to their political participation. From a pilot study, a voters-education class was held in social studies class at my school and the results of surveys conducted in Canada and North America, it suggested that that voter-education shouldn't be conducted in passive way but in more active and proactive-minded. An election awareness-raising group at my high school to convey the significance of elections to young people and carry out activities aimed at increasing their participation in politics.

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What we should do so that Japan becomes a country where refugees can live safely

GA05: Konko Gakuen Junior & Senior High School

Key words: refugees, knowledge, understanding, acceptance, communities, support

GA05

1. Introduction

The number of refugees around the world is increasing. There are many related issues such as which country will accept them and discrimination after that. Japan donates money to refugees, but gives no other support. Although refugees risk their lives to escape to other countries, they suffer and feel fear and loneliness during their lives in their new country. This situation must be changed.

In this research, we focused on the loneliness of refugees living in Japan, and propose solutions to that.

2. Methods and Results

We talked with a woman who escaped from Syria to Japan with her children, and a man who escaped from Indochina, and are living in Hiroshima now. They told us that of course they need money to live, but also the skills to talk with Japanese people in Japanese, and a community to be a part of.

We considered what can be done so that they can live better, and how we can improve people's knowledge about refugees, understanding, and acceptance of their opinions and culture.

3. Conclusion

We have formed 2 plans.

1. We should have more opportunities to know the environments and living conditions of those refugees in general. Thus, we would know what they want and what we can do for them.
2. We should have common places where refugees and Japanese people meet, talk and communicate. We even let them cook their own dishes to share with Japanese people for better understandings.

In doing the above, those refugees can build up their own communities where they can get together. Thus, they don't feel lonely any more. Meanwhile we will know better way to support them to establish the better system.

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Awards

None.